

Appendix G

Hydrologic and Hydraulic Analysis

Pre-Development - with BSS1 Proposed

=====

V V I SSSS U U A L (v 6.2.2018)

V V I SS U U A A L

V V I SS U U A A A A L

V V I SS U U A A L

W I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM

O O T T H H Y Y MM MM O O

O O T T H H Y M M O O

000 T T H H Y M M 000

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

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\2066cebd-6b02-49e9-ba3b-4ecd2a197da9\

Summary filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\2066cebd-6b02-49e9-ba3b-4ecd2a197da9\

DATE: 04-10-2024 TIME: 01:34:34

USER:

COMMENTS: _____

** SIMULATION : 100yrHope_SCSII_6hr.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\

Ptotal=101.62 mm		d550afd7-b542-4ce9-bfff-b1d2bb7f65fd\ff8cc32c								
		Comments: Mount Hope-6 hour SCS Distribution Desig								
		TIME	RAIN	TIME	RAIN		TIME	RAIN	TIME	RAIN
		hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr
		0.00	4.09	1.50	10.23	3.00	22.51	4.50	6.14	
		0.17	4.09	1.67	10.23	3.17	22.51	4.67	6.14	
		0.33	4.09	1.83	10.23	3.33	22.51	4.83	6.14	
		0.50	6.14	2.00	12.28	3.50	10.23	5.00	4.09	
		0.67	6.14	2.17	12.28	3.67	10.23	5.17	4.09	
		0.83	6.14	2.33	12.28	3.83	10.23	5.33	4.09	
		1.00	6.14	2.50	61.38	4.00	8.18	5.50	4.09	
		1.17	6.14	2.67	110.48	4.17	8.18	5.67	4.09	
		1.33	6.14	2.83	159.59	4.33	8.18			

CALIB					
NASHYD (5011)		Area (ha)=	80.20	Curve Number (CN)=	65.0
ID= 1 DT= 5.0 min		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.85		

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

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.787 (i)

TIME TO PEAK (hrs)= 3.833

RUNOFF VOLUME (mm)= 38.043

TOTAL RAINFALL (mm)= 101.620

RUNOFF COEFFICIENT = 0.374

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

CALIB					
STANDHYD (5012)		Area	(ha)=	37.32	
ID= 1 DT= 5.0 min		Total Imp(%)=	38.00	Dir. Conn.(%)=	24.00

		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	14.18	23.14		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	498.00	40.00		
Mannings n	=	0.013	0.250		

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

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)= 159.59 107.14

over (min) 5.00 15.00

Storage Coeff. (min)= 5.56 (ii) 14.01 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)=	0.20	0.08	*TOTALS*
PEAK FLOW (cms)=	3.73	3.85	6.934 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	43.75	56.20
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.43	0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

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

ADD HYD (0100)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	3.787	3.83	38.04
+ ID2= 2 (5012):	37.32	6.934	3.00	56.20
=====				
ID = 3 (0100):	117.52	7.862	3.00	43.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)			
IN= 2---> OUT= 1		Routing time step (min)'= 5.00	

<----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 /0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 /0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	

155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.10	86.94	.202E+03	0.0	0.25	78.80	
0.20	87.04	.452E+03	0.1	0.37	52.91	
0.30	87.14	.749E+03	0.3	0.47	42.34	
0.40	87.24	.109E+04	0.5	0.55	36.26	
0.50	87.34	.149E+04	0.8	0.62	32.18	
0.60	87.44	.193E+04	1.1	0.68	29.19	
0.70	87.54	.241E+04	1.5	0.74	26.87	
0.80	87.64	.295E+04	2.0	0.79	25.01	
0.90	87.74	.353E+04	2.5	0.84	23.46	
1.00	87.84	.421E+04	3.1	0.89	22.39	
1.10	87.94	.489E+04	4.5	0.63	31.56	
1.21	88.05	.150E+05	7.1	0.56	35.43	
1.33	88.17	.233E+05	10.6	0.54	36.49	
1.44	88.28	.346E+05	15.5	0.53	37.18	
1.56	88.40	.484E+05	22.8	0.56	35.35	
1.67	88.51	.634E+05	32.1	0.60	32.90	
1.79	88.63	.807E+05	41.2	0.61	32.65	
1.90	88.74	.101E+06	54.6	0.64	30.77	
2.02	88.86	.124E+06	64.7	0.62	31.85	

<---- hydrograph ----> <-pipe / channel->						
	AREA	OPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0100)	117.52	7.86	3.00	43.81	1.24	0.56
OUTFLOW: ID= 1 (0502)	117.52	4.95	3.92	43.81	1.12	0.62

CALIB						
NASHYD (5691)	Area (ha)=	2.30	Curve Number (CN)=	69.3		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	0.07				

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.315 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 42.025
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.414

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

CALIB						
STANDHYD (0575)	Area (ha)=	0.78				
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00		

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	0.51	0.27		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	72.11	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09

0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.500 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 39.092
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.385

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

CALIB						
NASHYD (5021)	Area (ha)=	3.67	Curve Number (CN)=	68.8		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	0.43				

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09

1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 102.89
over (min) 5.00 15.00
Storage Coeff. (min)= 1.74 (ii) 10.33 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.22 0.05 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.267 (iii)
RUNOFF VOLUME (mm)= 95.62 51.14 80.04
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.50 0.79

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (5082)	Area (ha)=	0.71				
ID= 1 DT= 5.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)=	64.00		

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	0.52	0.19		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	68.80	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14

0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 116.18
over (min) 5.00 10.00
Storage Coeff. (min)= 1.69 (ii) 9.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.11

TOTALS

PEAK FLOW (cms)= 0.20 0.04 0.243 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 43.76 76.94
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.43 0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0568)
ID= 1 DT= 5.0 min
Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 75.62
over (min) 5.00 15.00
Storage Coeff. (min)= 1.55 (ii) 11.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.33 0.09

TOTALS

PEAK FLOW (cms)= 0.15 0.02 0.172 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 37.55 75.29
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.37 0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min
Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

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

CALIB
STANDHYD (5092)
ID= 1 DT= 5.0 min
Area (ha)= 1.73
Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 116.63
over (min) 5.00 10.00
Storage Coeff. (min)= 1.73 (ii) 6.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

TOTALS

PEAK FLOW (cms)= 0.26 0.04 0.307 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 58.31 87.41
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.57 0.86

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 116.63
over (min) 5.00 15.00
Storage Coeff. (min)= 2.21 (ii) 10.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS

PEAK FLOW (cms)= 0.39 0.18 0.542 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 58.31 77.18
TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.57 0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min
Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.00 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 53.82
over (min) 5.00 15.00

Storage Coeff. (min)= 3.25 (ii) 14.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08
TOTALS
PEAK FLOW (cms)= 1.14 0.35 1.424 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 95.62 31.92 58.67
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.31 0.58

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 117.49
over (min) 5.00 15.00
Storage Coeff. (min)= 2.34 (ii) 10.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.60 0.15 0.730 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 58.77 82.72
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.58 0.81

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0501): 6.23 1.424 3.00 58.67
+ ID2= 2 (5082): 3.67 0.315 3.33 42.03
ID = 3 (0481): 9.90 1.601 3.00 52.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0481): 9.90 1.601 3.00 52.50
+ ID2= 2 (5082): 0.71 0.243 3.00 76.94
ID = 1 (0481): 10.61 1.844 3.00 54.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0481): 10.61 1.844 3.00 54.14
+ ID2= 2 (5092): 1.73 0.542 3.00 77.18
ID = 3 (0481): 12.34 2.386 3.00 57.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0481): 12.34 2.386 3.00 57.37
+ ID2= 2 (0510): 0.76 0.307 3.00 87.41
ID = 1 (0481): 13.10 2.693 3.00 59.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0481): 13.10 2.693 3.00 59.11
+ ID2= 2 (5282): 2.08 0.730 3.00 82.72
ID = 3 (0481): 15.18 3.423 3.00 62.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0481): 15.18 3.423 3.00 62.35
+ ID2= 2 (0568): 0.53 0.172 3.00 75.29
ID = 1 (0481): 15.71 3.595 3.00 62.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	3.595	3.00	62.78
+ ID2= 2 (5691):	2.30	0.500	3.00	39.09
=====				
ID = 3 (0481):	18.01	4.095	3.00	59.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	4.095	3.00	59.76
+ ID2= 2 (0575):	0.78	0.267	3.00	80.04
=====				
ID = 1 (0481):	18.79	4.362	3.00	60.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)				
ID= 1 DT= 5.0 min				
Area (ha)=	7.22	Curve Number (CN)=	80.7	
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
U.H. Tp(hrs)=	0.20			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09

1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 1.440 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 56.609
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.557

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

CALIB				
NASHYD (0522)				
ID= 1 DT= 5.0 min				
Area (ha)=	3.31	Curve Number (CN)=	63.1	
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
U.H. Tp(hrs)=	0.16			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.454 (i)
TIME TO PEAK (hrs)= 3.000

RUNOFF VOLUME (mm)= 35.995
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.354

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

CALIB				
STANDHYD (0580)				
ID= 1 DT= 5.0 min				
Area (ha)=	1.87			
Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00	
IMPERVIOUS PERVIOUS (i)				
Surface Area (ha)=	1.22	0.65		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	111.65	40.00		
Mannings n =	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 75.62
over (min) 5.00 15.00
Storage Coeff. (min)= 2.26 (ii) 11.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS

PEAK FLOW (cms)= 0.54 0.08 0.604 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 37.55 75.29
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.37 0.74

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0519)				
ID= 1 DT= 5.0 min				
Area (ha)=	2.08			
Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00	
IMPERVIOUS PERVIOUS (i)				
Surface Area (ha)=	1.35	0.73		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	117.76	40.00		
Mannings n =	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		

1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 15.00
Storage Coeff. (min)= 2.34 (ii) 12.21 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.60 0.09
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 36.14
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36

TOTALS
0.668 (iii)
3.00
74.80
101.62
0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529)
ID= 1 DT= 5.0 min

Area (ha)= 1.80
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09

0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 10.00
Storage Coeff. (min)= 2.24 (ii) 6.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

PEAK FLOW (cms)= 0.62 0.06
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 36.14
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36

TOTALS
0.682 (iii)
3.00
82.53
101.62
0.81

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0298)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0519):	2.08	0.668	3.00	74.80
+ ID2= 2 (0529):	1.80	0.682	3.00	82.53
=====				
ID = 3 (0298):	3.88	1.349	3.00	78.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0298)
3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0298):	3.88	1.349	3.00	78.39
+ ID2= 2 (0580):	1.87	0.604	3.00	75.29

ID = 1 (0298): 5.75 1.953 3.00 77.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0296)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0298):	5.75	1.953	3.00	77.38
+ ID2= 2 (0522):	3.31	0.454	3.00	35.99
=====				
ID = 3 (0296):	9.06	2.407	3.00	62.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0523)
ID= 1 DT= 5.0 min

Area (ha)= 6.61
Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09

1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 216.34
over (min) 5.00 10.00
Storage Coeff. (min)= 3.31 (ii) 9.69 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.26 0.11

PEAK FLOW (cms)= 1.44 0.70
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 55.38
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.55

TOTALS
2.137 (iii)
3.00
75.50
101.62
0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0291)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0296):	9.06	2.407	3.00	62.26
+ ID2= 2 (0523):	6.61	2.137	3.00	75.50
=====				
ID = 3 (0291):	15.67	4.544	3.00	67.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0525)
ID= 1 DT= 5.0 min

Area (ha)= 1.45
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)=	159.59	101.73							
over (min)	5.00	15.00							
Storage Coeff. (min)=	2.10 (ii)	10.73 (ii)							
Unit Hyd. Tpeak (min)=	5.00	15.00							
Unit Hyd. peak (cms)=	0.31	0.09							

PEAK FLOW (cms)=	0.42	0.09	0.494 (iii)						
TIME TO PEAK (hrs)=	3.00	3.08	3.00						
RUNOFF VOLUME (mm)=	95.62	50.55	79.84						
TOTAL RAINFALL (mm)=	101.62	101.62	101.62						
RUNOFF COEFFICIENT =	0.94	0.50	0.79						

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0304)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	275.07					
over (min)	5.00	10.00					
Storage Coeff. (min)=	2.19 (ii)	7.99 (ii)					
Unit Hyd. Tpeak (min)=	5.00	10.00					
Unit Hyd. peak (cms)=	0.31	0.13					

PEAK FLOW (cms)=	0.39	0.24	0.626 (iii)				
TIME TO PEAK (hrs)=	3.00	3.00	3.00				
RUNOFF VOLUME (mm)=	95.62	72.75	84.64				
TOTAL RAINFALL (mm)=	101.62	101.62	101.62				
RUNOFF COEFFICIENT =	0.94	0.72	0.83				

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0301)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0295):	24.34	6.389	3.00	65.23
+ ID2= 2 (0527):	1.68	0.626	3.00	84.64

ID = 3 (0301):	26.02	7.015	3.00	66.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0520)			
ID= 1 DT= 5.0 min			
	Area (ha)=	2.27	
	Total Imp(%)=	61.00	Dir. Conn.(%)= 61.00

IMPERVIOUS			
PERVIOUS (i)			
Surface Area (ha)=	1.38	0.89	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	123.02	40.00	
Mannings n =	0.013	0.250	

ID1= 1 (0291):	15.67	4.544	3.00	67.85
+ ID2= 2 (0525):	1.45	0.494	3.00	79.84

ID = 3 (0304):	17.12	5.038	3.00	68.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0295)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0304):	17.12	5.038	3.00	68.86
+ ID2= 2 (0524):	7.22	1.440	3.00	56.61

ID = 3 (0295):	24.34	6.389	3.00	65.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0527)			
ID= 1 DT= 5.0 min			
	Area (ha)=	1.68	
	Total Imp(%)=	76.00	Dir. Conn.(%)= 52.00

IMPERVIOUS			
PERVIOUS (i)			
Surface Area (ha)=	1.28	0.40	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	105.83	40.00	
Mannings n =	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		

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

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)=	159.59	107.32					
over (min)	5.00	15.00					
Storage Coeff. (min)=	2.40 (ii)	10.85 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.30	0.09					

PEAK FLOW (cms)=	0.61	0.17	0.753 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08	3.00				
RUNOFF VOLUME (mm)=	95.62	53.41	79.16				
TOTAL RAINFALL (mm)=	101.62	101.62	101.62				
RUNOFF COEFFICIENT =	0.94	0.53	0.78				

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0305)			

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0301):	26.02	7.015	3.00	66.48
+ ID2= 2 (0520):	2.27	0.753	3.00	79.16
ID = 3 (0305):	28.29	7.768	3.00	67.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0445)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1400	0.8343
	0.0195	0.2416	0.2360	1.0014
	0.0700	0.5564	0.3420	1.6616

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0305)	28.290	7.768	3.00	67.50
OUTFLOW: ID= 1 (0445)	28.290	0.328	5.17	67.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.22
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.5752

CALIB	Area (ha)=	0.94
STANDHYD (0526)	Total Imp(%)=	78.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	78.00
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.73	0.21
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	79.16	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14

0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 107.62
over (min) 5.00 10.00
Storage Coeff. (min)= 1.84 (ii) 6.19 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

PEAK FLOW (cms)= 0.32 0.05
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 53.57
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53

TOTALS

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0310)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0476	0.0432
	0.0096	0.0220	0.0579	0.0480
	0.0206	0.0306	0.0671	0.0528
	0.0297	0.0360	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0526)	0.940	0.374	3.00	86.37
OUTFLOW: ID= 1 (0310)	0.940	0.064	3.25	85.75

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.21
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0514

CALIB	Area (ha)=	1.44
STANDHYD (0574)	Total Imp(%)=	78.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	78.00
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.12	0.32
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	97.98	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 90.76
over (min) 5.00 10.00
Storage Coeff. (min)= 2.09 (ii) 6.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14
PEAK FLOW (cms)= 0.50 0.06
TOTALS 0.559 (iii)

TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 45.03
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.44

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0307)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0730	0.0642
	0.0150	0.0327	0.0890	0.0712
	0.0310	0.0455	0.1030	0.0784
	0.0450	0.0536	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0574)	1.440	0.559	3.00	84.49
OUTFLOW: ID= 1 (0307)	1.440	0.099	3.25	84.10

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.76
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0766

ADD HYD (0306)	1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0307):		1.44	0.099	3.25	84.10
+ ID2= 2 (0310):		0.94	0.064	3.25	85.75
ID = 3 (0306):		2.38	0.164	3.25	84.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	19.59
STANDHYD (0571)	Total Imp(%)=	68.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	50.00

Surface Area (ha)= IMPERVIOUS 13.32 PERVIOUS (i) 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 151.76
over (min) 5.00 15.00
Storage Coeff. (min)= 4.58 (ii) 11.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09
PEAK FLOW (cms)= 4.17 1.61 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 5.535 (iii)
RUNOFF VOLUME (mm)= 95.62 49.14 72.38
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.48 0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0572) | Area (ha)= 11.31
| ID= 1 DT= 5.0 min | Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 218.54
over (min) 5.00 15.00
Storage Coeff. (min)= 3.88 (ii) 10.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
PEAK FLOW (cms)= 2.44 1.33 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 3.610 (iii)
RUNOFF VOLUME (mm)= 95.62 65.60 80.61

TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.65 0.79

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0314) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0571): 19.59 5.535 3.00 72.38
+ ID2= 2 (0572): 11.31 3.610 3.00 80.61
===== 30.90 9.144 3.00 75.39
ID = 3 (0314): 30.90 9.144 3.00 75.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0573) | Area (ha)= 2.66
| ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.60 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09

0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 98.49
over (min) 5.00 15.00
Storage Coeff. (min)= 2.52 (ii) 11.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09
PEAK FLOW (cms)= 0.70 0.18 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.855 (iii)
RUNOFF VOLUME (mm)= 95.62 48.91 76.93
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.48 0.76

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0317) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0314): 30.90 9.144 3.00 75.39
+ ID2= 2 (0573): 2.66 0.855 3.00 76.93
===== 33.56 10.000 3.00 75.51
ID = 3 (0317): 33.56 10.000 3.00 75.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0446) | OVERFLOW IS OFF
| IN= 2----> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.2300 1.1312

0.0230 0.3704 | 0.2810 1.3850
0.0900 0.8066 | 0.4120 2.2335

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

INFLOW : ID= 2 (0317) 33.560 10.000 3.00 75.51
OUTFLOW: ID= 1 (0446) 33.560 0.395 5.25 74.78

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.95
TIME SHIFT OF PEAK FLOW (min)=135.00
MAXIMUM STORAGE USED (ha.m.)= 2.1254

ADD HYD (0102)
3 + 2 = 1

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

ID1= 3 (0102): 83.02 4.874 3.00 69.29
+ ID2= 2 (0502): 117.52 4.947 3.92 43.81
=====

ID = 1 (0102): 200.54 7.662 3.00 54.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

ADD HYD (0102)
1 + 2 = 3

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

ID1= 1 (0306): 2.38 0.164 3.25 84.76
+ ID2= 2 (0445): 28.29 0.328 5.17 67.26
=====

ID = 3 (0102): 30.67 0.460 3.58 68.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

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

ID1= 3 (0102): 30.67 0.460 3.58 68.61
+ ID2= 2 (0446): 33.56 0.395 5.25 74.78
=====

ID = 1 (0102): 64.23 0.829 3.92 71.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

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

ID1= 1 (0102): 64.23 0.829 3.92 71.83
+ ID2= 2 (0481): 18.79 4.362 3.00 60.60
=====

ID = 3 (0102): 83.02 4.874 3.00 69.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 /0.0700
127.36	84.21	0.0700
128.86	84.21	0.0700
130.86	85.21	0.0700 /0.0900
131.88	86.36	0.0900
140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89

1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

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

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0102)	200.54	7.66	3.00	54.36	1.43	1.18
OUTFLOW: ID= 1 (0503)	200.54	6.81	3.08	54.36	1.36	1.14

CALIB NASHYD (5031)
ID= 1 DT= 5.0 min

Area (ha)= 1.70
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.82

Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

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

TRANSFORMED HYETOGRAPH ----->

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.096 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 44.407
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.437

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

CALIB STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 12.20
Total Imp(%)= 59.00
Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	7.20	5.00
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	285.19	40.00
Mannings n =	0.013	0.250

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

TRANSFORMED HYETOGRAPH ----->

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 133.17

over (min) 5.00 15.00
Storage Coeff. (min)= 3.97 (ii) 11.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.09

PEAK FLOW (cms)= 2.47 1.14 3.440 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 51.84 72.41
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.51 0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)
1 + 2 = 3

ID1= 1 (0031): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
+ ID2= 2 (0032): 1.70 0.096 3.83 44.41
12.20 3.440 3.00 72.41
ID = 3 (0103): 13.90 3.465 3.00 68.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)
1 + 2 = 3

ID1= 1 (0103): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
+ ID2= 2 (0503): 13.90 3.465 3.00 68.99
200.54 6.814 3.08 54.36
ID = 3 (0104): 214.44 9.895 3.00 55.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

<----- DATA FOR SECTION (815.4) ----->
Distance Elevation Manning

CALIB
NASHYD (5041)
ID= 1 DT= 5.0 min
Area (ha)= 0.30 Curve Number (CN)= 68.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.89

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

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	4.09	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 41.113
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.405

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

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min
Area (ha)= 7.40
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

TRAVEL TIME TABLE
INFLW : ID= 2 (0104) 214.44 9.90 3.00 55.30 0.84 0.35
OUTFLOW: ID= 1 (0504) 214.44 7.50 3.25 55.30 0.80 0.34

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 4.88 2.52
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 222.11 40.00
Mannings n = 0.013 0.250

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

TRANSFORMED HYETOGRAPH

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 133.73
over (min) 5.00 15.00
Storage Coeff. (min)= 3.42 (ii) 11.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

PEAK FLOW (cms)= 1.74 0.58 2.236 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 49.77 74.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.49 0.73

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

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

ADD HYD (0105)				
1	2	3		

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5041):	0.30	0.015	3.92	41.11
+ ID2= 2 (5042):	7.40	2.236	3.00	74.53
=====				
ID = 3 (0105):	7.70	2.240	3.00	73.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)				
1	2	3		

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	7.70	2.240	3.00	73.22
+ ID2= 2 (0504):	214.44	7.501	3.25	55.30
=====				
ID = 3 (0106):	222.14	8.306	3.17	55.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (5211)				
ID= 1 DT= 5.0 min	Area	(ha)=	1.90	Curve Number (CN)= 77.0
	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.95	

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

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51
0.167	4.09	1.667	10.23	3.167	22.51
0.250	4.09	1.750	10.23	3.250	22.51
0.333	4.09	1.833	10.23	3.333	22.51
0.417	4.09	1.917	10.23	3.417	22.51
0.500	4.09	2.000	10.23	3.500	22.51
0.583	6.14	2.083	12.28	3.583	10.23
0.667	6.14	2.167	12.28	3.667	10.23
0.750	6.14	2.250	12.28	3.750	10.23
0.833	6.14	2.333	12.28	3.833	10.23
0.917	6.14	2.417	12.28	3.917	10.23

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	143.83	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.12 (ii)	11.64 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.09	
TOTALS			
PEAK FLOW (cms)=	2.37	1.65	3.795 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	58.15	73.14
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.57	

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)				
1	2	3		

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5211):	1.90	0.113	3.92	51.71
+ ID2= 2 (5212):	13.80	3.795	3.00	73.14
=====				
ID = 3 (0112):	15.70	3.821	3.00	70.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)				
1	2	3		

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	222.14	8.306	3.17	55.92
+ ID2= 2 (0112):	15.70	3.821	3.00	70.55
=====				
ID = 3 (0114):	237.84	11.803	3.00	56.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.113 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 51.711
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.509

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

CALIB		
STANDHYD (5212)		
ID= 1 DT= 5.0 min	Area (ha)=	13.80
	Total Imp(%)=	52.00
	Dir. Conn.(%)=	40.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.18	6.62
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51
0.167	4.09	1.667	10.23	3.167	22.51
0.250	4.09	1.750	10.23	3.250	22.51
0.333	4.09	1.833	10.23	3.333	22.51
0.417	4.09	1.917	10.23	3.417	22.51
0.500	4.09	2.000	10.23	3.500	22.51
0.583	6.14	2.083	12.28	3.583	10.23
0.667	6.14	2.167	12.28	3.667	10.23
0.750	6.14	2.250	12.28	3.750	10.23
0.833	6.14	2.333	12.28	3.833	10.23
0.917	6.14	2.417	12.28	3.917	10.23
1.000	6.14	2.500	12.28	4.000	10.23
1.083	6.14	2.583	61.38	4.083	8.18

ROUTE CHN(0505)		
IN= 2-->	OUT= 1	

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 /0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 /0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.84 11.80 3.00 56.89 0.81 0.56
OUTFLOW: ID= 1 (0505) 237.84 11.04 3.08 56.89 0.78 0.55

CALIB
NASHYD (5051) | Area (ha)= 1.30 Curve Number (CN)= 68.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.084 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 41.118
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.405

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

CALIB
STANDHYD (5052) | Area (ha)= 14.60
ID= 1 DT= 5.0 min | Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.64 4.96
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 311.98 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 133.73
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.19 (ii) 11.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.09

TOTALS

PEAK FLOW (cms)= 3.39 1.12 4.336 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 49.77 74.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.49 0.73

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5051): 1.30 0.084 3.58 41.12
+ ID2= 2 (5052): 14.60 4.336 3.00 74.53
===== ID = 3 (0107): 15.90 4.367 3.00 71.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0107): 15.90 4.367 3.00 71.80
+ ID2= 2 (0505): 237.84 11.037 3.08 56.89
===== ID = 3 (0108): 253.74 14.334 3.00 57.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900
45.97 80.05 0.0900
65.23 79.93 0.0900
84.49 80.35 0.0900
113.49 80.02 0.0900
136.48 80.07 0.0900
188.81 79.81 0.0900
197.86 79.25 0.0900 /0.0700 Main Channel

200.70 78.22 0.0700 Main Channel
203.29 79.35 0.0700 /0.0900 Main Channel
204.01 79.67 0.0900
236.47 80.40 0.0900
277.80 80.48 0.0900
305.35 80.37 0.0900
346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 78.34 .979E+01 0.0 0.23 21.53
0.23 78.45 .392E+02 0.0 0.37 13.56
0.34 78.56 .881E+02 0.1 0.48 10.35
0.46 78.68 .157E+03 0.3 0.58 8.54
0.57 78.79 .245E+03 0.6 0.67 7.36
0.68 78.91 .352E+03 0.9 0.76 6.52
0.80 79.02 .480E+03 1.4 0.84 5.88
0.91 79.13 .627E+03 1.9 0.92 5.38
1.03 79.25 .793E+03 2.7 0.99 4.98
1.15 79.37 .103E+04 3.8 1.09 4.55
1.28 79.50 .135E+04 5.2 1.16 4.28
1.40 79.62 .175E+04 7.1 1.20 4.12
1.52 79.75 .228E+04 9.3 1.21 4.08
1.65 79.87 .318E+04 11.7 1.10 4.52
1.77 80.00 .524E+04 15.8 0.90 5.52
1.90 80.12 .973E+04 24.3 0.74 6.69
2.02 80.24 .158E+05 39.7 0.75 6.62
2.15 80.37 .230E+05 59.2 0.77 6.46
2.27 80.49 .349E+05 90.3 0.77 6.44

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.74 14.33 3.00 57.82 1.73 0.96
OUTFLOW: ID= 1 (0506) 253.74 12.85 3.17 57.82 1.68 1.03

CALIB
NASHYD (5061) | Area (ha)= 3.90 Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.273 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 44.407
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.437

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

CALIB			
STANDHYD (5062)	Area (ha)= 7.80		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 53.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.07	2.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	228.04	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 140.91
over (min) 5.00 15.00
Storage Coeff. (min)= 3.47 (ii) 11.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

TOTALS
PEAK FLOW (cms)= 1.80 0.67 2.375 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 52.92 75.55
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.52 0.74

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0061):	3.90	0.273	3.58	44.41
+ ID2= 2 (5062):	7.80	2.375	3.00	75.55

ID = 3 (0109): 11.70 2.477 3.00 65.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0109):	11.70	2.477	3.00	65.17
+ ID2= 2 (0506):	253.74	12.847	3.17	57.82
ID = 3 (0110):	265.44	14.024	3.08	58.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (5101)	Area (ha)= 0.80	Curve Number (CN)= 66.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.42		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 39.043
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.384

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

CALIB			
STANDHYD (5102)	Area (ha)= 0.90		
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00	Dir. Conn.(%)= 35.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	0.45
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	77.46	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 120.33
over (min) 5.00 10.00
Storage Coeff. (min)= 1.82 (ii) 9.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00

Unit Hyd. peak (cms)= 0.32 0.11

PEAK FLOW (cms)= 0.14 0.10

TIME TO PEAK (hrs)= 3.00 3.08

RUNOFF VOLUME (mm)= 95.62 46.47

TOTAL RAINFALL (mm)= 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.46

TOTALS

0.241 (iii)

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)

1 + 2 = 3

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

ID1= 1 (5101): 0.80 0.026 4.58 39.04

+ ID2= 2 (5102): 0.90 0.241 3.00 63.67

=====

ID = 3 (0115): 1.70 0.244 3.00 52.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)

IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

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

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.361E+03	0.6	0.24	9.91

0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.128 (i)

TIME TO PEAK (hrs)= 3.500

RUNOFF VOLUME (mm)= 40.070

TOTAL RAINFALL (mm)= 101.620

RUNOFF COEFFICIENT = 0.394

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

CALIB

STANDHYD (5112)

ID= 1 DT= 5.0 min

Area (ha)= 1.10

Total Imp(%)= 50.00

Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 0.55 0.55

Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00

Length (m)= 85.63 40.00

Mannings n = 0.013 0.250

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09

0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

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

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0115)	1.70	0.24	3.00	52.08	0.05	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.18	3.08	52.08	0.03	0.24

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09

1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 134.29

over (min) 5.00 10.00

Storage Coeff. (min)= 1.93 (ii) 9.65 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00

Unit Hyd. peak (cms)= 0.31 0.11

PEAK FLOW (cms)= 0.17 0.14 0.313 (iii)

TIME TO PEAK (hrs)= 3.00 3.00 3.00

RUNOFF VOLUME (mm)= 95.62 52.00 67.26

TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.51 0.66

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)

1 + 2 = 3

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

ID1= 1 (5111): 1.90 0.128 3.50 40.07

+ ID2= 2 (5112): 1.10 0.313 3.00 67.26

=====

ID = 3 (0116): 3.00 0.366 3.00 50.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)

1 + 2 = 3

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

ID1= 1 (0116): 3.00 0.366 3.00 50.04

+ ID2= 2 (0511): 1.70 0.175 3.08 52.08

=====

ID = 3 (0117): 4.70 0.533 3.00 50.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)		Routing time step (min)'= 5.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (484.2) ----->			
Distance	Elevation	Manning	
0.00	80.80	0.0900	
9.73	80.46	0.0900	
14.10	82.04	0.0900	
17.18	82.28	0.0900	
41.13	82.12	0.0900 /0.0700	Main Channel
46.88	79.71	0.0700	Main Channel
51.41	80.90	0.0700 /0.0900	Main Channel
94.29	80.56	0.0900	
175.64	80.72	0.0900	
192.09	80.85	0.0900	
<----- TRAVEL TIME TABLE ----->			
DEPTH	ELEV	VOLUME	FLOW RATE
(m)	(m)	(cu.m.)	(cms)
0.13	79.84	.255E+02	0.0
0.26	79.98	.102E+03	0.0
0.40	80.11	.229E+03	0.1
0.53	80.24	.408E+03	0.3
0.66	80.37	.637E+03	0.6
0.79	80.51	.934E+03	0.9
0.93	80.64	.245E+04	1.6
1.06	80.77	.873E+04	4.6
1.19	80.90	.179E+05	11.4
1.32	81.04	.278E+05	22.6
1.46	81.17	.381E+05	37.5
1.60	81.31	.484E+05	55.4
1.74	81.45	.588E+05	76.0
1.87	81.59	.693E+05	99.3
2.01	81.72	.798E+05	125.0
2.15	81.86	.903E+05	153.1
2.29	82.00	.101E+06	183.5
2.42	82.14	.112E+06	214.3
2.56	82.27	.123E+06	244.4
<----- hydrograph ----->			
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0117)	4.70	0.53	3.00
OUTFLOW : ID= 1 (0512)	4.70	0.32	3.25
<-pipe / channel->			
MAX DEPTH	MAX VEL		
(m)	(m/s)		
0.64	0.41		
0.54	0.36		

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 146.06 40.00
Mannings n = 0.013 0.250

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

<----- TRANSFORMED HYETOGRAPH ----->							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		
Max.Eff.Inten.(mm/hr)=	159.59	138.15					
over (min)	5.00	15.00					
Storage Coeff. (min)=	2.66 (ii)	10.30 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.29	0.09					
TOTALS							
PEAK FLOW (cms)=	0.66	0.32	0.934 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08					
RUNOFF VOLUME (mm)=	95.62	52.54	72.79				
TOTAL RAINFALL (mm)=	101.62	101.62	101.62				
RUNOFF COEFFICIENT =	0.94	0.52	0.72				

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
NASHYD (5121)	Area (ha)= 0.70	Curve Number (CN)= 71.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.14		

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

<----- TRANSFORMED HYETOGRAPH ----->							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.031 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 44.405
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.437

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

CALIB			
STANDHYD (5122)	Area (ha)= 3.20		
ID= 1 DT= 5.0 min	Total Imp(%)= 60.00	Dir. Conn.(%)= 47.00	

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.92 1.28

ADD HYD (0118)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (5121):	0.70	0.031	4.17
+ ID2= 2 (5122):	3.20	0.934	3.00
ID = 3 (0118):	3.90	0.939	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0118):	3.90	0.939	3.00
+ ID2= 2 (0512):	4.70	0.324	3.25
ID = 3 (0119):	8.60	1.194	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0119):	265.44	14.024	3.08
+ ID2= 2 (0119):	8.60	1.194	3.00
ID = 3 (0120):	274.04	14.840	3.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6011)	Area (ha)= 44.10	Curve Number (CN)= 62.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.83		

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

<----- TRANSFORMED HYETOGRAPH ----->							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14

0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.942 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

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

CALIB		
STANDHYD (6012)	Area (ha)= 11.00	
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00	Dir. Conn.(%)= 16.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.00	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14

0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 91.88
over (min) 5.00 15.00
Storage Coeff. (min)= 3.85 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS

PEAK FLOW (cms)= 0.76 1.16 1.726 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.35 48.35
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.48

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

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

ADD HYD (0124)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6011):	44.10	1.942	3.83	35.16
+ ID2= 2 (6012):	11.00	1.726	3.00	48.35
ID = 3 (0124):	55.10	2.327	3.50	37.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
NASHYD (6021)	Area (ha)= 43.60	Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.95	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.734 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

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

CALIB		
STANDHYD (6022)	Area (ha)= 12.90	
ID= 1 DT= 5.0 min	Total Imp(%)= 35.00	Dir. Conn.(%)= 23.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.51	8.38

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 94.24
over (min) 5.00 15.00
Storage Coeff. (min)= 4.04 (ii) 12.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS

PEAK FLOW (cms)= 1.28 1.26 2.325 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.77 52.62
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.52

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

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

ADD HYD (0125)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	43.60	1.734	4.00	35.16
+ ID2= 2 (0022):	12.90	2.325	3.00	52.62
=====				
ID = 3 (0125):	56.50	2.680	3.00	39.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0124):	55.10	2.327	3.50	37.79
+ ID2= 2 (0125):	56.50	2.680	3.00	39.14
=====				
ID = 3 (0126):	111.60	4.886	3.00	38.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)	
IN= 2---- OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->				
Distance	Elevation	Manning		
0.00	92.58	0.1400		
8.54	92.59	0.1400		
22.11	92.47	0.1400		
48.74	91.83	0.1400		
67.59	91.58	0.1400		
86.45	91.21	0.1400		
103.50	90.80	0.1400		
118.09	90.23	0.1400		
127.84	90.09	0.1400 / 0.0700	Main Channel	
129.84	89.59	0.0700	Main Channel	
130.34	90.09	0.0700 / 0.1400	Main Channel	
140.57	90.14	0.1400		
161.87	90.11	0.1400		
177.03	90.04	0.1400		
188.67	89.87	0.1400		
199.59	90.31	0.1400		
212.02	90.96	0.1400		
225.58	91.35	0.1400		
252.71	91.66	0.1400		

0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.771 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 45.555
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.448

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

CALIB	
STANDHYD (6032)	Area (ha)= 10.73
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.00	7.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	267.46	40.00
Mannings n =	0.013	0.250

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

<----- TRANSFORMED HYETOGRAPH ----->							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14

274.11 91.86 0.1400

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ---->		<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0126)	111.60	4.89	3.00 38.48
OUTFLOW: ID= 1 (0603)	111.60	3.29	4.50 38.47
			0.66 0.25

CALIB	
NASHYD (6031)	Area (ha)= 19.00 Curve Number (CN)= 72.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.32

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

<----- TRANSFORMED HYETOGRAPH ----->							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14

0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	61.38	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 118.78
over (min) 5.00 15.00
Storage Coeff. (min)= 3.82 (ii) 11.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
PEAK FLOW (cms)= 0.70 1.55 2.007 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 50.39 57.17
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.50 0.56

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

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

ADD HYD (0127)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6031):	19.00	0.771	4.42	45.55
+ ID2= 2 (6032):	10.73	2.007	3.00	57.17
=====				
ID = 3 (0127):	29.73	2.110	3.00	49.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	

| NASHYD (6131)| Area (ha)= 1.77 Curve Number (CN)= 66.0
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.22

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.220 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 38.999
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.384

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

| CALIB |
| STANDHYD (6222)| Area (ha)= 2.02
|ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.58 0.44
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 116.05 40.00

Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 86.94
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.32 (ii) 6.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS
PEAK FLOW (cms)= 0.70 0.88 0.779 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 43.13 84.07
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.42 0.83

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

| STANDHYD (6142)| Area (ha)= 1.50
|ID= 1 DT= 5.0 min | Total Imp(%)= 69.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.04 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 157.45
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.12 (ii) 9.37 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.12
TOTALS
PEAK FLOW (cms)= 0.33 0.14 0.474 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 49.44 72.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.49 0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (6152)| Area (ha)= 2.14
|ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.67 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 119.44 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 86.94
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.36 (ii) 6.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS
PEAK FLOW (cms)= 0.74 0.09 0.824 (iii)

TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 43.13 84.07
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.42 0.83

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6182)
ID= 1 DT= 5.0 min
Area (ha)= 1.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.16 0.33
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 99.67 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 259.23
over (min) 5.00 10.00
Storage Coeff. (min)= 2.11 (ii) 8.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.13
TOTALS
PEAK FLOW (cms)= 0.33 0.18 0.507 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 58.82 77.22
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.58 0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302)
ID= 1 DT= 5.0 min
Area (ha)= 0.86
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.81 0.05
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.72 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09

0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 5.00
Storage Coeff. (min)= 1.79 (ii) 4.19 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.32 0.24

PEAK FLOW (cms)= 0.36 0.01 0.368 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 36.14 92.05
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36 0.91

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6172)
ID= 1 DT= 5.0 min
Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14

Max.Eff.Inten.(mm/hr)= 159.59 286.12
over (min) 5.00 10.00
Storage Coeff. (min)= 2.41 (ii) 8.12 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.13
TOTALS
PEAK FLOW (cms)= 0.51 0.31 0.818 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 65.65 80.63
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.65 0.79

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0342)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6142): 1.50 0.474 3.00 72.53
+ ID2= 2 (6152): 2.14 0.824 3.00 84.07
===== ID = 3 (0342): 3.64 1.298 3.00 79.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342) 3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0342):	3.64	1.298	3.00	79.31
+ ID2= 2 (6172):	2.31	0.818	3.00	80.63
=====				
ID = 1 (0342):	5.95	2.116	3.00	79.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342) 1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	5.95	2.116	3.00	79.83
+ ID2= 2 (6182):	1.49	0.507	3.00	77.22
=====				
ID = 3 (0342):	7.44	2.623	3.00	79.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342) 3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0342):	7.44	2.623	3.00	79.30
+ ID2= 2 (6222):	2.02	0.779	3.00	84.07
=====				
ID = 1 (0342):	9.46	3.402	3.00	80.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342) 1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	9.46	3.402	3.00	80.32
+ ID2= 2 (6302):	0.86	0.368	3.00	92.05
=====				
ID = 3 (0342):	10.32	3.770	3.00	81.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (6212) | Area (ha)= 1.15
ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.40
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	87.56	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	15.00
Storage Coeff. (min)=	1.96 (ii)	11.83 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.31	0.09
		TOTALS
PEAK FLOW (cms)=	0.33	0.05
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	95.62	36.14
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36
		0.74

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6232) | Area (ha)= 0.85
ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.55	0.30
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	75.28	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	15.00
Storage Coeff. (min)=	1.79 (ii)	11.66 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.32	0.09
		TOTALS
PEAK FLOW (cms)=	0.24	0.04
		0.274 (iii)

TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	36.14	74.79
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36	0.74

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0488) 1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6212):	1.15	0.370	3.00	74.80
+ ID2= 2 (6232):	0.85	0.274	3.00	74.79
=====				
ID = 3 (0488):	2.00	0.645	3.00	74.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6262) | Area (ha)= 0.96
ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.58	0.38
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	80.00	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14

0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	109.06	
over (min)	5.00	15.00	
Storage Coeff. (min)=	1.85 (ii)	10.25 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.32	0.09	
			TOTALS
PEAK FLOW (cms)=	0.25	0.08	0.319 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	54.32	79.09
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.53	0.78

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0346)				
1 + 2 = 3				
ID1= 1 (0342):	10.32	3.770	3.00	81.30
+ ID2= 2 (0488):	2.00	0.645	3.00	74.80
ID = 3 (0346):	12.32	4.414	3.00	80.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
3 + 2 = 1				
AREA	QPEAK	TPEAK	R.V.	

	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0346):	12.32	4.414	3.00	80.24
+ ID2= 2 (6131):	1.77	0.220	3.08	39.00
ID = 1 (0346):	14.09	4.606	3.00	75.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
1 + 2 = 3				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0346):	14.09	4.606	3.00	75.06
+ ID2= 2 (6262):	0.96	0.319	3.00	79.09
ID = 3 (0346):	15.05	4.925	3.00	75.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0447)				
IN= 2----> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.0000	0.1070	0.3146	
0.0150	0.1715	0.7100	0.8031	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (0346)	15.050	4.925	3.00	75.32
OUTFLOW : ID= 1 (0447)	15.050	0.656	3.58	75.13

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.32
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.7608

CALIB				
STANDHYD(6202)				
ID= 1 DT= 5.0 min				
Area (ha)=	1.26			
Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.18	0.08	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	91.65	40.00	
Mannings n =	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74	
over (min)	5.00	5.00	
Storage Coeff. (min)=	2.01 (ii)	4.41 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.23	
			TOTALS
PEAK FLOW (cms)=	0.52	0.01	0.539 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	36.14	92.05
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36	0.91

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0491)				
IN= 2----> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
OUTFLOW	STORAGE	OUTFLOW	STORAGE	

	(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.0580	0.0848	
0.0090	0.0366	0.0000	0.0000	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
INFLOW : ID= 2 (6202)	1.260	0.539	3.00	92.05
OUTFLOW: ID= 1 (0491)	1.260	0.056	3.58	91.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.35
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0829

CALIB				
STANDHYD (6062)				
ID= 1 DT= 5.0 min				
Area (ha)=	1.98			
Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.29	0.69	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	114.89	40.00	
Mannings n =	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 15.00
Storage Coeff. (min)= 2.30 (ii) 12.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.57 0.08 0.636 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 36.14 74.80
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36 0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6122) | Area (ha)= 2.18
ID= 1 DT= 5.0 min | Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.05 0.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 120.55 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09

0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 5.00
Storage Coeff. (min)= 2.37 (ii) 4.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.30 0.22

TOTALS
PEAK FLOW (cms)= 0.90 0.03 0.930 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 36.14 92.05
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36 0.91

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1000) | OVERFLOW IS OFF
IN= 2----> OUT= 1 |
DT= 5.0 min |
OUTFLOW (cms) STORAGE (ha.m.) | OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 | 0.1000 0.1464
0.0159 0.0631 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (6122) 2.180 0.930 3.00 92.05
OUTFLOW: ID= 1 (1000) 2.180 0.096 3.58 91.59

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.37
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1433

ADD HYD (0493) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (1000): 2.18 0.096 3.58 91.59
+ ID2= 2 (0491): 1.26 0.056 3.58 91.24
===== ID = 3 (0493): 3.44 0.152 3.58 91.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0493) |
3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0493): 3.44 0.152 3.58 91.46
+ ID2= 2 (0062): 1.98 0.636 3.00 74.80
===== ID = 1 (0493): 5.42 0.752 3.00 85.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0319) |
IN= 2----> OUT= 1 | Routing time step (min)= 5.00

<----- DATA FOR SECTION (2135.9) ----->

Distance Elevation Manning
0.00 92.50 0.0700
36.57 92.00 0.0700
90.03 91.00 0.0700
124.58 90.00 0.0700 / 0.0350 Main Channel
128.34 89.59 0.0350 Main Channel
129.84 89.59 0.0350 Main Channel
132.39 90.00 0.0350 / 0.0700 Main Channel
163.76 91.00 0.0700
187.47 91.00 0.0700
203.83 91.00 0.0700
306.44 92.00 0.0700

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 89.69 .215E+03 0.1 0.46 33.36
0.20 89.79 .579E+03 0.4 0.67 22.75
0.31 89.90 .109E+04 1.0 0.84 18.13
0.41 90.00 .175E+04 1.9 0.99 15.37
0.54 90.13 .324E+04 4.0 1.14 13.36
0.68 90.27 .581E+04 7.3 1.15 13.32
0.81 90.40 .945E+04 11.9 1.15 13.29

0.94 90.53 .142E+05 18.0 1.17 13.10
1.08 90.67 .200E+05 26.0 1.19 12.79
1.21 90.80 .268E+05 36.0 1.23 12.42
1.34 90.93 .348E+05 48.2 1.27 12.03
1.48 91.07 .464E+05 58.3 1.15 13.27
1.61 91.20 .629E+05 78.8 1.15 13.30
1.74 91.33 .819E+05 104.3 1.17 13.08
1.88 91.47 .103E+06 135.3 1.20 12.74
2.01 91.60 .128E+06 172.1 1.24 12.35
2.14 91.73 .154E+06 215.1 1.28 11.94
2.28 91.87 .183E+06 264.7 1.32 11.54
2.41 92.00 .215E+06 321.3 1.37 11.15

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0493) 5.42 0.75 3.00 85.37 0.26 0.76
OUTFLOW: ID= 1 (0319) 5.42 0.41 3.08 85.36 0.20 0.66

CALIB
STANDHYD (6162) | Area (ha)= 0.44
ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09

0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 109.06
over (min) 5.00 10.00
Storage Coeff. (min)= 1.47 (ii) 5.81 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.33 0.15

TOTALS

PEAK FLOW (cms)= 0.15 0.02 0.176 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 54.32 86.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53 0.85

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min

Area (ha)= 2.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 109.06
over (min) 5.00 10.00
Storage Coeff. (min)= 1.81 (ii) 6.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

TOTALS

PEAK FLOW (cms)= 0.31 0.05 0.355 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 54.32 86.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53 0.85

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0489)
1 + 2 = 3

AREA QPEAK TPEAK R.V.

0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 321.04
over (min) 5.00 10.00
Storage Coeff. (min)= 2.47 (ii) 7.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.13

TOTALS

PEAK FLOW (cms)= 0.55 0.38 0.933 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 75.63 85.63
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.74 0.84

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6242)
ID= 1 DT= 5.0 min

Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6102):	2.49	0.933	3.00	85.63
+ ID2= 2 (6162):	0.44	0.176	3.00	86.53
=====				
ID = 3 (0489):	2.93	1.109	3.00	85.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0489)
3 + 2 = 1

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

ID1= 3 (0489): 2.93 1.109 3.00 85.76
+ ID2= 2 (6242): 0.89 0.355 3.00 86.53
=====

ID = 1 (0489): 3.82 1.464 3.00 85.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0490)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1760	0.2330
0.0280	0.0927	0.0000	0.0000

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

INFLOW : ID= 2 (0489) 3.820 1.464 3.00 85.94
OUTFLOW: ID= 1 (0490) 3.820 0.169 3.58 85.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.56
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.2268

CALIB
STANDHYD (6192)
ID= 1 DT= 5.0 min

Area (ha)= 1.64
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.07 0.57
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 120.10
over (min) 5.00 15.00
Storage Coeff. (min)= 2.18 (ii) 10.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

TOTALS

PEAK FLOW (cms)= 0.47 0.13 0.580 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 60.19 83.21
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.59 0.82

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

+ ID2= 2 (0603):	111.60	3.287	4.50	38.47
=====				
ID = 1 (0128):	167.26	5.222	4.33	46.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning	
0.00	86.75	0.0900	
3.09	87.40	0.0900	
18.33	87.41	0.0900	
35.33	86.99	0.0900	
73.84	86.75	0.0900	
103.33	86.41	0.0900	
120.33	86.11	0.0900	
129.46	86.13	0.0900	
143.37	85.32	0.0900	
154.33	85.02	0.0900	
161.57	85.09	0.0900	
163.05	84.78	0.0900 / 0.0700	Main Channel
166.55	83.78	0.0700	Main Channel
168.05	84.78	0.0700 / 0.1100	Main Channel
172.02	85.29	0.1100	
191.39	86.19	0.1100	
270.18	85.78	0.1100	
296.33	86.36	0.1100	
324.34	86.68	0.1100	
368.56	87.05	0.1100	

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0319):	5.42	0.413	3.08	85.36
+ ID2= 2 (0447):	15.05	0.656	3.58	75.13
=====				
ID = 3 (0318):	20.47	0.960	3.17	77.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0318):	20.47	0.960	3.17	77.84
+ ID2= 2 (0490):	3.82	0.169	3.58	85.72
=====				
ID = 1 (0318):	24.29	1.124	3.50	79.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0318):	24.29	1.124	3.50	79.08
+ ID2= 2 (6192):	1.64	0.580	3.00	83.21
=====				
ID = 3 (0318):	25.93	1.501	3.00	79.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0127):	29.73	2.110	3.00	49.75
+ ID2= 2 (0318):	25.93	1.501	3.00	79.34
=====				
ID = 3 (0128):	55.66	3.611	3.00	63.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	55.66	3.611	3.00	63.53

+ ID2= 2 (0603):	111.60	3.287	4.50	38.47
=====				
ID = 1 (0128):	167.26	5.222	4.33	46.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

					<---- hydrograph ---->	<-pipe / channel-->	
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.26	5.22	4.33	46.81	2.37	0.08	
OUTFLOW: ID= 1 (0604)	167.26	3.75	4.83	46.81	2.28	0.09	

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB				
NASHYD (6041)	Area	(ha)=	1.70	Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	4.12		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.032 (i)

TIME TO PEAK (hrs)= 7.500
RUNOFF VOLUME (mm)= 54.387
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.535

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

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min

Area (ha)= 22.30
Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.49 7.81
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 385.57 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 165.04
over (min) 5.00 15.00
Storage Coeff. (min)= 4.76 (ii) 11.87 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.09

105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 / 0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100
404.40	82.68	0.1100

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

----- hydrograph -----

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0130)	191.26	8.24	3.00	50.76	1.14
OUTFLOW: ID= 1 (0605)	191.26	4.05	5.08	50.76	0.94

TOTALS
PEAK FLOW (cms)= 5.01 2.24 6.959 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 62.70 80.15
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.62 0.79

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6041):	1.70	0.032	7.50	54.39
+ ID2= 2 (6042):	22.30	6.959	3.00	80.15
=====				
ID = 3 (0129):	24.00	6.960	3.00	78.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0129):	24.00	6.960	3.00	78.32
+ ID2= 2 (0604):	167.26	3.751	4.83	46.81
=====				
ID = 3 (0130):	191.26	8.238	3.00	50.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2----> OUT= 1

Routing time step (min)= 5.00

----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100

CALIB
NASHYD (6111)
ID= 1 DT= 5.0 min

Area (ha)= 0.60 Curve Number (CN)= 77.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.08

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.033 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 51.708
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.509

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

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min

Area (ha)= 10.80
Total Imp(%)= 62.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.70 4.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 268.33 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 148.49
over (min) 5.00 15.00
Storage Coeff. (min)= 3.83 (ii) 11.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

PEAK FLOW (cms)= 2.34 1.07 3.255 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 57.09 76.35
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.56 0.75

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.014 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 39.039
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.384

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

CALIB	
STANDHYD (6052)	Area (ha)= 15.50
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.23	5.27
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	321.46	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		

ADD HYD (0137)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6111):	0.60	0.033	4.08	51.71
+ ID2= 2 (6112):	10.80	3.255	3.00	76.35
=====				
ID = 3 (0137):	11.40	3.261	3.00	75.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):	11.40	3.261	3.00	75.06
+ ID2= 2 (0605):	191.26	4.051	5.08	50.76
=====				
ID = 3 (0139):	202.66	5.994	3.00	52.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.40	Curve Number (CN)=	66.0
NASHYD (6051)	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		1.31		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09

1.500	6.14	3.000	159.59	4.500	8.18

Max.Eff.Inten.(mm/hr)= 159.59 128.04
over (min) 5.00 15.00
Storage Coeff. (min)= 4.27 (ii) 12.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

PEAK FLOW (cms)= 3.59 1.13 4.539 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 47.60 73.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.47 0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6051):	0.40	0.014	4.42	39.04
+ ID2= 2 (6052):	15.50	4.539	3.00	73.53
=====				
ID = 3 (0131):	15.90	4.541	3.00	72.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0131):	15.90	4.541	3.00	72.66
+ ID2= 2 (0139):	202.66	5.994	3.00	52.13
=====				
ID = 3 (0132):	218.56	10.535	3.00	53.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)	Routing time step (min)=	5.00
IN= 2----> OUT= 1		

<----- DATA FOR SECTION (350.0) ----->				
Distance	Elevation	Manning		
0.00	81.70	0.1100		
3.84	81.72	0.1100		
5.87	80.72	0.1100		
9.38	81.42	0.1100		
49.64	81.07	0.1100		
80.61	80.72	0.1100		
85.61	81.14	0.1100		
93.32	80.00	0.1100		
95.04	80.45	0.1100		
102.72	80.66	0.1100		
110.13	78.93	0.1100 / 0.0700	Main Channel	
118.05	78.63	0.0700	Main Channel	
124.40	78.89	0.0700 / 0.1100	Main Channel	
132.18	79.61	0.1100		
139.34	79.23	0.1100		
144.67	79.43	0.1100		
149.63	79.98	0.1100		
153.42	79.79	0.1100		
158.56	80.58	0.1100		
176.89	81.15	0.1100		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)

INFLOW : ID= 2 (0132) 218.56 10.54 3.00 53.62 0.84 0.75
 OUTFLOW: ID= 1 (0530) 218.56 8.27 3.08 53.62 0.76 0.73

CALIB	Area (ha)=	5.80	
STANDHYD (5302)	Total Imp(%)=	60.00	Dir. Conn.(%)= 48.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.48	2.32
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	120.33
over (min)	5.00	15.00
Storage Coeff. (min)=	3.18 (ii)	11.25 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.27	0.09

PEAK FLOW (cms)=	1.22	0.48
		TOTALS 1.622 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00
 RUNOFF VOLUME (mm)= 95.62 46.47 70.06
 TOTAL RAINFALL (mm)= 101.62 101.62 101.62
 RUNOFF COEFFICIENT = 0.94 0.46 0.69

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 66.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.56	8.265	3.08	53.62
+ ID2= 2 (5302):	5.80	1.622	3.00	70.06
ID = 3 (0134):	224.36	9.202	3.00	54.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	274.04	14.840	3.08	58.15
+ ID2= 2 (0134):	224.36	9.202	3.00	54.05
ID = 3 (0135):	498.40	24.041	3.00	56.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	Routing time step (min)=	5.00
IN= 2----> OUT= 1		

<----- DATA FOR SECTION (40.0) ----->			
Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	

40.79	79.05	0.0900
47.58	79.05	0.0900
54.30	79.07	0.0900
60.87	79.24	0.0900
71.39	79.48	0.0900
73.53	78.96	0.0900
76.96	78.07	0.0900
82.21	77.08	0.0900 / 0.0700
85.82	76.28	0.0700
89.97	76.89	0.0700
91.35	77.38	0.0700 / 0.0900
95.27	78.68	0.0900
98.44	79.63	0.0900
102.89	79.89	0.0900

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.40	24.04	3.00	56.30	2.31
OUTFLOW: ID= 1 (0507)	498.40	20.25	3.25	56.30	2.15

CALIB	Area (ha)=	8.40	Curve Number (CN)=	74.0
NASHYD (5071)				

|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 1.72

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.292 (i)
TIME TO PEAK (hrs)= 4.917
RUNOFF VOLUME (mm)= 47.930
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.472

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

| CALIB |
| STANDHYD (5072) | Area (ha)= 40.50
| ID= 1 DT= 5.0 min | Total Imp(%)= 45.00 Dir. Conn.(%)= 30.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.23	22.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	519.62	40.00
Mannings n	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 138.69
over (min) 5.00 15.00
Storage Coeff. (min)= 5.70 (ii) 13.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS
PEAK FLOW (cms)= 5.04 5.04 9.320 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 54.93 67.14
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.54 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0121) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5071):	8.40	0.292	4.92	47.93
+ ID2= 2 (5072):	40.50	9.320	3.00	67.14
ID = 3 (0121):	48.90	9.346	3.00	63.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0122) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0121): 48.90 9.346 3.00 63.84
+ ID2= 2 (0507): 498.40 20.254 3.25 56.30
ID = 3 (0122): 547.30 26.073 3.17 56.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| STORE HYD(1505) | AREA (ha)= 253.60
| ID= 1 DT= 5.0min | QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 47.57

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26

1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18

6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15

10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.15
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.14
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15
10.67	0.00	42.00	0.26	73.33	0.62	104.67	0.16	136.00	0.15
10.75	0.00	42.08	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15
10.92	0.00	42.25	0.26	73.58	0.60	104.92	0.16	136.25	0.15
11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15
11.17	0.00	42.50	0.26	73.83	0.59	105.17	0.16	136.50	0.15
11.25	0.00	42.58	0.26	73.92	0.57	105.25	0.16	136.58	0.15
11.33	0.00	42.67	0.26	74.00	0.57	105.33	0.16	136.67	0.14
11.42	0.00	42.75	0.25	74.08	0.57	105.42	0.16	136.75	0.15
11.50	0.00	42.83	0.26	74.17	0.56	105.50	0.16	136.83	0.14
11.58	0.00	42.92	0.25	74.25	0.58	105.58	0.16	136.92	0.14
11.67	0.00	43.00	0.25	74.33	0.58	105.67	0.16	137.00	0.14
11.75	0.00	43.08	0.25	74.42	0.58	105.75	0.17	137.08	0.15
11.83	0.00	43.17	0.25	74.50	0.59	105.83	0.16	137.17	0.14
11.92	0.00	43.25	0.25	74.58	0.60	105.92	0.16	137.25	0.15
12.00	0.00	43.33	0.25	74.67	0.57	106.00	0.16	137.33	0.15
12.08	0.00	43.42	0.25	74.75	0.56	106.08	0.16	137.42	0.14
12.17	0.00	43.50	0.25	74.83	0.54	106.17	0.16	137.50	0.14
12.25	0.00	43.58	0.25	74.92	0.56	106.25	0.17	137.58	0.14
12.33	0.00	43.67	0.25	75.00	0.53	106.33	0.16	137.67	0.15
12.42	0.00	43.75	0.25	75.08	0.51	106.42	0.16	137.75	0.14
12.50	0.00	43.83	0.26	75.17	0.51	106.50	0.16	137.83	0.14
12.58	0.00	43.92	0.26	75.25	0.51	106.58	0.16	137.92	0.14
12.67	0.00	44.00	0.26	75.33	0.51	106.67	0.16	138.00	0.14
12.75	0.00	44.08	0.26	75.42	0.50	106.75	0.16	138.08	0.14
12.83	0.00	44.17	0.26	75.50	0.50	106.83	0.15	138.17	0.14
12.92	0.00	44.25	0.27	75.58	0.49	106.92	0.15	138.25	0.14
13.00	0.00	44.33	0.26	75.67	0.49	107.00	0.16	138.33	0.14
13.08	0.00	44.42	0.26	75.75	0.49	107.08	0.16	138.42	0.14
13.17	0.00	44.50	0.26	75.83	0.48	107.17	0.16	138.50	0.14
13.25	0.00	44.58	0.26	75.92	0.47	107.25	0.15	138.58	0.14
13.33	0.00	44.67	0.26	76.00	0.47	107.33	0.16	138.67	0.14
13.42	0.00	44.75	0.26	76.08	0.48	107.42	0.16	138.75	0.14
13.50	0.00	44.83	0.26	76.17	0.46	107.50	0.15	138.83	0.14
13.58	0.00	44.92	0.26	76.25	0.45	107.58	0.16	138.92	0.14
13.67	0.00	45.00	0.26	76.33	0.45	107.67	0.15	139.00	0.14
13.75	0.00	45.08	0.26	76.42	0.43	107.75	0.15	139.08	0.14
13.83	0.00	45.17	0.25	76.50	0.44	107.83	0.16	139.17	0.13
13.92	0.00	45.25	0.25	76.58	0.46	107.92	0.16	139.25	0.14
14.00	0.00	45.33	0.25	76.67	0.43	108.00	0.16	139.33	0.14
14.08	0.00	45.42	0.25	76.75	0.44	108.08	0.15	139.42	0.14
14.17	0.00	45.50	0.25	76.83	0.43	108.17	0.15	139.50	0.14
14.25	0.00	45.58	0.25	76.92	0.45	108.25	0.15	139.58	0.13

14.33	0.00	45.67	0.25	77.00	0.42	108.33	0.16	139.67	0.14
14.42	0.00	45.75	0.25	77.08	0.43	108.42	0.16	139.75	0.14
14.50	0.00	45.83	0.26	77.17	0.43	108.50	0.15	139.83	0.13
14.58	0.00	45.92	0.25	77.25	0.42	108.58	0.15	139.92	0.14
14.67	0.00	46.00	0.26	77.33	0.41	108.67	0.15	140.00	0.14
14.75	0.00	46.08	0.26	77.42	0.43	108.75	0.16	140.08	0.13
14.83	0.00	46.17	0.25	77.50	0.41	108.83	0.15	140.17	0.13
14.92	0.69	46.25	0.26	77.58	0.43	108.92	0.15	140.25	0.13
15.00	0.69	46.33	0.26	77.67	0.39	109.00	0.15	140.33	0.13
15.08	0.71	46.42	0.26	77.75	0.39	109.08	0.15	140.42	0.14
15.17	0.74	46.50	0.26	77.83	0.37	109.17	0.15	140.50	0.13
15.25	0.74	46.58	0.26	77.92	0.39	109.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74								

22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11

31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16

STORE HYD(1605)		AREA	(ha)= 218.70
ID= 1	DT= 5.0min	QPEAK	(cms)= 1.37
		TPEAK	(hrs)= 71.92
		VOLUME	(mm)= 85.77

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25

26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10

7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22

11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17

15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15

19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13

23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11

28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

V V I SSSSS U U A L (v 6.2.2018)
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voain.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\8f16b887-90ae-4a69-982c-b83db2e03177\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\8f16b887-90ae-4a69-982c-b83db2e03177\

DATE: 04-10-2024 TIME: 01:34:42

USER:

COMMENTS:

** SIMULATION : 10yrII6.stm **

READ STORM	File name: C:\Users\jannaormond\AppData\Local\Temp\d550afd7-b542-4ce9-bff9-b1d2bb7f65fd\62f3650e						
Ptotal= 67.60 mm	Comments: Mount Hope-6 hour SCS Distribution Desig						
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	2.70	1.50	6.76	3.00	14.87	4.50	4.06
0.17	2.70	1.67	6.76	3.17	14.87	4.67	4.06
0.33	2.70	1.83	6.76	3.33	14.87	4.83	4.06
0.50	4.06	2.00	8.11	3.50	6.76	5.00	2.70
0.67	4.06	2.17	8.11	3.67	6.76	5.17	2.70
0.83	4.06	2.33	8.11	3.83	6.76	5.33	2.70

1.00	4.06	2.50	40.56	4.00	5.41	5.50	2.70
1.17	4.06	2.67	73.01	4.17	5.41	5.67	2.70
1.33	4.06	2.83	105.46	4.33	5.41	5.83	2.70

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.741 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 18.089
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.268

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

CAL

| STANDHYD (5012) | Area (ha)= 37.32
|ID= 1 DT= 5.0 min | Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.00 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 44.47
over (min)= 5.00 20.00
Storage Coeff. (min)= 6.56 (ii) 18.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06
PEAK FLOW (cms)= 2.40 1.55 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.25 3.431 (iii)
RUNOFF VOLUME (mm)= 61.60 21.60 31.20
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.32 0.46

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)

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

ADD HYD (0100) |
1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (5011): 80.20 1.741 3.92 18.09
+ ID2= 2 (5012): 37.32 3.431 3.00 31.20
ID = 3 (0100): 117.52 3.793 3.00 22.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502) |
IN= 2--> OUT= 1 | Routing time step (min)'= 5.00
----- DATA FOR SECTION (1537.5) ----->
Distance Elevation Manning
0.00 89.30 0.1100
4.20 89.28 0.1100
9.03 88.80 0.1100
21.55 88.78 0.1100
29.06 88.24 0.1100
39.87 87.83 0.1100
55.54 87.84 0.1100 /0.0700 Main Channel
57.54 86.84 0.0700 Main Channel
59.04 86.84 0.0700 Main Channel
61.04 87.84 0.0700 /0.1100 Main Channel
74.10 87.86 0.1100
87.72 88.07 0.1100
101.34 88.18 0.1100
113.53 88.23 0.1100
128.57 88.32 0.1100
142.19 88.61 0.1100
155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 86.94 .202E+03 0.0 0.25 78.80
0.20 87.04 .452E+03 0.1 0.37 52.91
0.30 87.14 .749E+03 0.3 0.47 42.34

0.40 87.24 .109E+04 0.5 0.55 36.26
0.50 87.34 .149E+04 0.8 0.62 32.18
0.60 87.44 .193E+04 1.1 0.68 29.19
0.70 87.54 .241E+04 1.5 0.74 26.87
0.80 87.64 .295E+04 2.0 0.79 25.01
0.90 87.74 .353E+04 2.5 0.84 23.46
1.00 87.84 .421E+04 3.1 0.89 22.39
1.10 87.94 .489E+04 4.5 0.63 31.56
1.21 88.05 .150E+05 7.1 0.56 35.43
1.33 88.17 .233E+05 10.6 0.54 36.49
1.44 88.28 .346E+05 15.5 0.53 37.18
1.56 88.40 .484E+05 22.8 0.56 35.35
1.67 88.51 .634E+05 32.1 0.60 32.90
1.79 88.63 .807E+05 41.2 0.61 32.65
1.90 88.74 .101E+06 54.6 0.64 30.77
2.02 88.86 .124E+06 64.7 0.62 31.85

----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 117.52 3.79 3.00 22.25 1.05 0.74
OUTFLOW: ID= 1 (0502) 117.52 2.74 3.58 22.25 0.93 0.86

CALIB
NASHYD (5691) | Area (ha)= 2.30 Curve Number (CN)= 69.3
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.07

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70

1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 1.220
PEAK FLOW (cms)= 0.245 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 18.974
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.281

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

CALIB
NASHYD (5021) | Area (ha)= 3.67 Curve Number (CN)= 68.8
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.43

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.147 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 20.352
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.301

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

CALIB
STANDHYD (0575)
ID= 1 DT= 5.0 min

Area (ha)= 0.78
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 44.30
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.06 (ii) 14.09 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS

PEAK FLOW (cms)= 0.15 0.02 0.166 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 25.86 49.08
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38 0.73

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5082)
ID= 1 DT= 5.0 min

Area (ha)= 0.71
Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.52 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 68.80 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70

1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.43
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.00 (ii) 13.61 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.13 0.02 0.147 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 21.69 47.22
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.32 0.70

TOTALS

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0568)
ID= 1 DT= 5.0 min

Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 29.81
over (min)= 5.00 20.00
Storage Coeff. (min)= 1.83 (ii) 15.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.32 0.07

TOTALS

PEAK FLOW (cms)= 0.10 0.01 0.107 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 17.82 46.26
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.26 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min

Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 52.93
over (min) 5.00 15.00
Storage Coeff. (min)= 2.04 (ii) 13.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS

PEAK FLOW (cms)= 0.17 0.02 0.187 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 30.54 54.76
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.45 0.81

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	PERVIOUS (i)
STANDHYD (5092)	1.73	
ID= 1 DT= 5.0 min	Total Imp(%)= 50.60	Dir. Conn.(%)= 50.60
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.88	0.85
Dep. Storage (mm)=	6.00	8.00

Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 52.93
over (min) 5.00 15.00
Storage Coeff. (min)= 2.61 (ii) 13.82 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS

PEAK FLOW (cms)= 0.25 0.08 0.322 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 30.54 46.25
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.45 0.68

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	PERVIOUS (i)
STANDHYD (0501)	6.23	
ID= 1 DT= 5.0 min	Total Imp(%)= 42.00	Dir. Conn.(%)= 42.00
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.62	3.61
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	203.80	40.00
Mannings n =	0.013	0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 20.98
over (min) 5.00 25.00
Storage Coeff. (min)= 3.83 (ii) 20.06 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05

TOTALS

PEAK FLOW (cms)= 0.75 0.12 0.811 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 61.60 14.77 34.44
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.22 0.51

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	PERVIOUS (i)
STANDHYD (5282)	2.08	
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.35	0.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	117.76	40.00
Mannings n =	0.013	0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 53.51
over (min) 5.00 15.00
Storage Coeff. (min)= 2.76 (ii) 13.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

TOTALS

PEAK FLOW (cms)=	0.39	0.07	0.451 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	61.60	30.86	50.84
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.46	0.75

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	6.23	0.811	3.00	34.44
+ ID2= 2 (5021):	3.67	0.147	3.33	20.35
=====				
ID = 3 (0481):	9.90	0.887	3.00	29.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	9.90	0.887	3.00	29.21
+ ID2= 2 (5082):	0.71	0.147	3.00	47.22
=====				
ID = 1 (0481):	10.61	1.033	3.00	30.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	10.61	1.033	3.00	30.42
+ ID2= 2 (5092):	1.73	0.322	3.00	46.25
=====				
ID = 3 (0481):	12.34	1.356	3.00	32.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	12.34	1.356	3.00	32.64
+ ID2= 2 (0510):	0.76	0.187	3.00	54.76
=====				
ID = 1 (0481):	13.10	1.542	3.00	33.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	13.10	1.542	3.00	33.92
+ ID2= 2 (5282):	2.08	0.451	3.00	50.84
=====				
ID = 3 (0481):	15.18	1.993	3.00	36.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	15.18	1.993	3.00	36.24
+ ID2= 2 (0568):	0.53	0.107	3.00	46.26
=====				
ID = 1 (0481):	15.71	2.100	3.00	36.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	2.100	3.00	36.58
+ ID2= 2 (5691):	2.30	0.245	3.00	18.97
=====				
ID = 3 (0481):	18.01	2.345	3.00	34.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	2.345	3.00	34.33
+ ID2= 2 (0575):	0.78	0.166	3.00	49.08
=====				
ID = 1 (0481):	18.79	2.511	3.00	34.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	7.22	Curve Number (CN)= 80.7
	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.20		

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

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 0.738 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 29.420
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.435

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

CALIB				
NASHYD (0522)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	3.31	Curve Number (CN)= 63.1
	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.16		

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

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.207 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 16.970
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.251

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

CALIB				
STANDHYD (0580)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	1.87	
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

Surface Area (ha)= IMPERVIOUS 1.22 PERVIOUS (i) 0.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 111.65 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 29.81
over (min) 5.00 20.00
Storage Coeff. (min)= 2.67 (ii) 16.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.06
PEAK FLOW (cms)= 0.35 0.03 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.25 0.373 (iii)
RUNOFF VOLUME (mm)= 61.60 17.82 46.27
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.26 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0519) Area (ha)= 2.08
ID= 1 DT= 5.0 min Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.76 (ii) 17.13 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.06
PEAK FLOW (cms)= 0.39 0.03 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.25 0.413 (iii)
RUNOFF VOLUME (mm)= 61.60 17.04 46.00

TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

over (min) 5.00 20.00
Storage Coeff. (min)= 2.64 (ii) 17.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.06
PEAK FLOW (cms)= 0.41 0.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.25 0.420 (iii)
RUNOFF VOLUME (mm)= 61.60 17.04 51.79
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.77

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529) Area (ha)= 1.80
ID= 1 DT= 5.0 min Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.44

ADD HYD (0298)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0519): 2.08 0.413 3.00 46.00
+ ID2= 2 (0529): 1.80 0.420 3.00 51.79
=====

ID = 3 (0298): 3.88 0.833 3.00 48.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0298)
3 + 2 = 1 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0298): 3.88 0.833 3.00 48.69
+ ID2= 2 (0580): 1.87 0.373 3.00 46.27
=====

ID = 1 (0298): 5.75 1.206 3.00 47.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0296)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0298): 5.75 1.206 3.00 47.90

+ ID2= 2 (0522): 3.31 0.207 3.00 16.97
=====

ID = 3 (0296): 9.06 1.413 3.00 36.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0523) | Area (ha)= 6.61
ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 115.46
over (min) 5.00 15.00
Storage Coeff. (min)= 3.90 (ii) 12.11 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
1.209 (iii)

PEAK FLOW (cms)= 0.94 0.32

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 43.62
over (min) 5.00 15.00
Storage Coeff. (min)= 2.48 (ii) 14.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

PEAK FLOW (cms)= 0.27 0.04
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 61.60 25.49
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38

TOTALS
0.306 (iii)

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0304) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0291): 15.67 2.622 3.00 40.33
+ ID2= 2 (0525): 1.45 0.306 3.00 48.95
=====

ID = 3 (0304): 17.12 2.928 3.00 41.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0295) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.

TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 29.30 45.45
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.43 0.67

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0291) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0296): 9.06 1.413 3.00 36.60
+ ID2= 2 (0523): 6.61 1.209 3.00 45.45
=====

ID = 3 (0291): 15.67 2.622 3.00 40.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0525) | Area (ha)= 1.45
ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06

ID1= 1 (0304):	17.12	2.928	3.00	41.06
+ ID2= 2 (0524):	7.22	0.738	3.08	29.42
=====				
ID = 3 (0295):	24.34	3.602	3.00	37.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0527) | Area (ha)= 1.68
ID= 1 DT= 5.0 min | Total Imp(%)= 76.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.28 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 105.83 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 162.12
over (min) 5.00 10.00
Storage Coeff. (min)= 2.59 (ii) 9.75 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.11

PEAK FLOW (cms)= 0.25 0.13 0.383 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 41.71 52.05
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.62 0.77

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0301)
1 + 2 = 3
ID1= 1 (0295): 24.34 3.602 3.00 37.61
+ ID2= 2 (0527): 1.68 0.383 3.00 52.05
ID = 3 (0301): 26.02 3.985 3.00 38.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0520)
ID= 1 DT= 5.0 min
Area (ha)= 2.27
Total Imp(%)= 61.00 Dir. Conn.(%)= 61.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.38 0.89
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 123.02 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06

0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 46.97
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.83 (ii) 14.59 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

PEAK FLOW (cms)= 0.40 0.07 0.461 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 27.31 48.22
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40 0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0305)
1 + 2 = 3
ID1= 1 (0301): 26.02 3.985 3.00 38.54
+ ID2= 2 (0520): 2.27 0.461 3.00 48.22
ID = 3 (0305): 28.29 4.446 3.00 39.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0445) OVERFLOW IS OFF

1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 47.15
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.17 (ii) 13.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.21 0.02 0.228 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.41 54.07
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.80

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0310) OVERFLOW IS OFF
IN= 2---> OUT= 1
DT= 5.0 min
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.0476 0.0432
0.0096 0.0220 0.0579 0.0480
0.0206 0.0306 0.0671 0.0528
0.0297 0.0360 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0526) 0.940 0.228 3.00 54.07
OUTFLOW: ID= 1 (0310) 0.940 0.027 3.58 53.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.80
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0345

CALIB
STANDHYD (0574)
ID= 1 DT= 5.0 min
Area (ha)= 1.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IN= 2---> OUT= 1
DT= 5.0 min
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.1400 0.8343
0.0195 0.2416 0.2360 1.0014
0.0700 0.5564 0.3420 1.6616

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0305) 28.290 4.446 3.00 39.32
OUTFLOW: ID= 1 (0445) 28.290 0.192 5.25 39.12

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.32
TIME SHIFT OF PEAK FLOW (min)=135.00
MAXIMUM STORAGE USED (ha.m.)= 0.9251

CALIB
STANDHYD (0526)
ID= 1 DT= 5.0 min
Area (ha)= 0.94
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.73 0.21
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 79.16 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.12 0.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 97.98 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 37.49
over (min) 5.00 20.00
Storage Coeff. (min)= 2.47 (ii) 15.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.07

PEAK FLOW (cms)= 0.33 0.02 *TOTALS* 0.340 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 22.11 52.91
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.33 0.78

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

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

RESERVOIR(0307)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW (cms) STORAGE (ha.m.) OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 0.0730 0.0642
0.0150 0.0327 0.0890 0.0712
0.0310 0.0455 0.1030 0.0784
0.0450 0.0536 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0574) 1.440 0.340 3.00 52.91
OUTFLOW: ID= 1 (0307) 1.440 0.041 3.58 52.53

PEAK FLOW REDUCTION [Qout/Qin](%)= 12.02
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0513

ADD HYD (0306)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0307): 1.44 0.041 3.58 52.53
+ ID2= 2 (0310): 0.94 0.027 3.58 53.45
===== ID = 3 (0306): 2.38 0.068 3.58 52.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0571)
ID= 1 DT= 5.0 min
Area (ha)= 19.59
Total Imp(%)= 68.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 13.32 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 77.97
over (min) 5.00 20.00
Storage Coeff. (min)= 5.41 (ii) 15.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.07

PEAK FLOW (cms)= 2.71 0.69 *TOTALS* 3.187 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.10 43.35
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.37 0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0572)
ID= 1 DT= 5.0 min
Area (ha)= 11.31
Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 123.41
over (min) 5.00 15.00
Storage Coeff. (min)= 4.58 (ii) 12.57 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 1.59 0.67 *TOTALS* 2.164 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 36.25 48.92
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.54 0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0314)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0571):	19.59	3.187	3.00	43.35
+ ID2= 2 (0572):	11.31	2.164	3.00	48.92
=====				
ID = 3 (0314):	30.90	5.352	3.00	45.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0573)				
ID= 1 DT= 5.0 min				
	Area (ha)=	2.66		
	Total Imp(%)=	60.00	Dir. Conn.(%)=	60.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.60	1.06
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	133.17	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 41.76

over (min)	5.00	20.00	
Storage Coeff. (min)=	2.97 (ii)	15.29 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.28	0.07	
			TOTALS
PEAK FLOW (cms)=	0.46	0.07	0.512 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	61.60	24.46	46.74
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.36	0.69

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0317)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0314):	30.90	5.352	3.00	45.39
+ ID2= 2 (0573):	2.66	0.512	3.00	46.74
=====				
ID = 3 (0317):	33.56	5.863	3.00	45.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0446)				
IN= 2----> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)	
0.0000	0.0000	0.2300	1.1312	
0.0230	0.3704	0.2810	1.3850	
0.0900	0.8066	0.4120	2.2335	
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0317)	33.560	5.863	3.00	45.50
OUTFLOW : ID= 1 (0446)	33.560	0.257	5.17	44.87

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.38
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.2644

ADD HYD (0102)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0306):	2.38	0.068	3.58	52.89
+ ID2= 2 (0445):	28.29	0.192	5.25	39.12
=====				
ID = 3 (0102):	30.67	0.240	5.00	40.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	30.67	0.240	5.00	40.19
+ ID2= 2 (0446):	33.56	0.257	5.17	44.87
=====				
ID = 1 (0102):	64.23	0.496	5.08	42.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0102):	64.23	0.496	5.08	42.64
+ ID2= 2 (0481):	18.79	2.511	3.00	34.94
=====				
ID = 3 (0102):	83.02	2.676	3.00	40.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	83.02	2.676	3.00	40.89
+ ID2= 2 (0502):	117.52	2.740	3.00	22.25
=====				
ID = 1 (0102):	200.54	4.231	3.00	29.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	
IN= 2----> OUT= 1	

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->				
Distance	Elevation	Manning		
0.00	86.78	0.0900		
25.34	87.17	0.0900		
68.44	87.04	0.0900		
117.13	86.81	0.0900		
125.36	85.21	0.0900 / 0.0700	Main Channel	
127.36	84.21	0.0700	Main Channel	
128.86	84.21	0.0700	Main Channel	
130.86	85.21	0.0700 / 0.0900	Main Channel	
131.88	86.36	0.0900		
140.63	86.77	0.0900		
168.26	86.90	0.0900		
169.81	87.10	0.0900		
202.11	87.50	0.0900		
239.06	87.35	0.0900		
270.29	87.83	0.0900		
283.90	87.90	0.0900		
297.51	87.86	0.0900		
324.73	87.89	0.0900		
351.95	87.78	0.0900		
388.59	87.46	0.0900		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

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

AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0102) 200.54 4.23 3.00 29.97 1.12 0.98
OUTFLOW: ID= 1 (0503) 200.54 3.75 3.50 29.97 1.07 0.94

CALIB
NASHYD (5031) Area (ha)= 1.70 Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.82

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.046 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 21.745
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.322

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

CALIB
STANDHYD (5032) Area (ha)= 12.20
ID= 1 DT= 5.0 min Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 58.34
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.69 (ii) 15.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.07

PEAK FLOW (cms)= 1.61 0.48 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 26.62 43.06
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.39 0.64

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)
1 + 2 = 3
ID1= 1 (5031): 1.70 0.046 3.83 21.75
+ ID2= 2 (0502): 12.20 1.944 3.00 43.06
ID = 3 (0103): 13.90 1.954 3.00 40.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)
1 + 2 = 3
ID1= 1 (0103): 13.90 1.954 3.00 40.45
+ ID2= 2 (0503): 200.54 3.752 3.50 29.97
ID = 3 (0104): 214.44 5.325 3.00 30.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2----> OUT= 1 Routing time step (min)= 5.00

----- DATA FOR SECTION (815.4) -----
Distance Elevation Manning
19.10 82.03 0.0900
29.01 83.14 0.0900
40.83 82.56 0.0900
81.51 82.27 0.0900
122.18 82.68 0.0900
169.31 82.61 0.0900
217.10 82.90 0.0900
229.61 83.66 0.0900 / 0.0700 Main Channel
232.80 81.85 0.0700 Main Channel
243.24 83.87 0.0700 Main Channel
257.77 84.06 0.0900
312.01 83.52 0.0900

415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900
513.93 82.96 0.0900
526.85 83.23 0.0900
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 81.96 .117E+02 0.0 0.18 23.95
0.23 82.08 .492E+02 0.1 0.28 15.67
0.34 82.19 .135E+03 0.2 0.34 13.00
0.45 82.30 .312E+03 0.4 0.32 13.44
0.57 82.42 .116E+04 1.2 0.28 15.74
0.68 82.53 .287E+04 3.5 0.32 13.85
0.79 82.64 .549E+04 7.0 0.33 13.13
0.91 82.76 .101E+05 14.9 0.39 11.28
1.02 82.87 .155E+05 27.5 0.47 9.38
1.13 82.98 .214E+05 45.2 0.55 7.89
1.25 83.10 .277E+05 67.2 0.64 6.87
1.36 83.21 .344E+05 93.6 0.71 6.12
1.47 83.32 .426E+05 125.3 0.77 5.67
1.59 83.44 .516E+05 162.2 0.82 5.30
1.70 83.55 .620E+05 204.2 0.86 5.06
1.81 83.66 .747E+05 254.0 0.89 4.90
1.95 83.80 .924E+05 324.9 0.92 4.74
2.08 83.93 .113E+06 411.3 0.95 4.59
2.21 84.06 .135E+06 515.5 1.00 4.37

----- hydrograph -----<-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0104) 214.44 5.32 3.00 30.65 0.74 0.32
OUTFLOW: ID= 1 (0504) 214.44 4.21 3.58 30.65 0.70 0.32

CALIB
NASHYD (5041) Area (ha)= 0.30 Curve Number (CN)= 68.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.89

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.007 (i)
 TIME TO PEAK (hrs)= 3.917
 RUNOFF VOLUME (mm)= 19.823
 TOTAL RAINFALL (mm)= 67.600
 RUNOFF COEFFICIENT = 0.293

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

CALIB	
STANDHYD (5042)	
ID= 1 DT= 5.0 min	

Area (ha)= 7.40
 Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.88	2.52
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	222.11	40.00
Mannings n =	0.013	0.250

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

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

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.91
 over (min) 5.00 15.00
 Storage Coeff. (min)= 4.04 (ii) 14.85 (ii)
 Unit Hyd. Tpeak (min)= 5.00 15.00
 Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 1.14 0.26 1.347 (iii)
 TIME TO PEAK (hrs)= 3.00 3.17 3.00
 RUNOFF VOLUME (mm)= 61.60 25.36 44.93
 TOTAL RAINFALL (mm)= 67.60 67.60 67.60
 RUNOFF COEFFICIENT = 0.91 0.38 0.66

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 68.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)				
ID= 1 DT= 3				

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):	0.30	0.007	3.92	19.82
+ ID2= 2 (5042):	7.40	1.347	3.00	44.93
ID = 3 (0105):	7.70	1.348	3.00	43.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)				
ID= 1 DT= 3				

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0105):	7.70	1.348	3.00	43.95
+ ID2= 2 (0504):	214.44	4.212	3.58	30.65
ID = 3 (0106):	222.14	4.503	3.50	31.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (5211)	
ID= 1 DT= 5.0 min	

Area (ha)= 1.90 Curve Number (CN)= 77.0
 Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
 U.H. Tp(hrs)= 0.95

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.056 (i)
 TIME TO PEAK (hrs)= 4.000

RUNOFF VOLUME (mm)= 26.220
 TOTAL RAINFALL (mm)= 67.600
 RUNOFF COEFFICIENT = 0.388

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

CALIB	
STANDHYD (5212)	
ID= 1 DT= 5.0 min	

Area (ha)= 13.80
 Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.18	6.62
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 77.38
 over (min) 5.00 15.00
 Storage Coeff. (min)= 4.87 (ii) 14.49 (ii)
 Unit Hyd. Tpeak (min)= 5.00 15.00
 Unit Hyd. peak (cms)= 0.22 0.08

TOTALS

PEAK FLOW (cms)= 1.54 0.78 2.189 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 30.73 43.08
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.45 0.64

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)
1 + 2 = 3
ID1= 1 (5211): 1.90 0.056 4.00 26.22
+ ID2= 2 (5212): 13.80 2.189 3.00 43.08
ID = 3 (0112): 15.70 2.199 3.00 41.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3
ID1= 1 (0106): 222.14 4.503 3.50 31.11
+ ID2= 2 (0112): 15.70 2.199 3.00 41.04
ID = 3 (0114): 237.84 6.489 3.00 31.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2--> OUT= 1 | Routing time step (min)= 5.00

DATA FOR SECTION (553.6) -----
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100

NASHYD (5051) | Area (ha)= 1.30 Curve Number (CN)= 68.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.039 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 19.829
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.293

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

CALIB
STANDHYD (5052) | Area (ha)= 14.60
ID= 1 DT= 5.0 min | Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.64 4.96
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 311.98 40.00

69.13 79.02 0.1100
92.42 79.04 0.1100
98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 /0.0700 Main Channel
336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 /0.0900 Main Channel
394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70
0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74
1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

hydrograph pipe / channel-
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.84 6.49 3.00 31.76 0.58 0.45
OUTFLOW: ID= 1 (0505) 237.84 5.90 3.08 31.76 0.54 0.44

CALIB

Mannings n = 0.013 0.250

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

TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.91
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.95 (ii) 15.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.07
PEAK FLOW (cms)= 2.20 0.47 2.526 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.36 44.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38 0.66

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	1.30	0.039	3.58	19.83
+ ID2= 2 (0502):	14.60	2.526	3.00	44.93
=====				
ID = 3 (0107):	15.90	2.538	3.00	42.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0107):	15.90	2.538	3.00	42.88
+ ID2= 2 (0505):	237.84	5.896	3.08	31.76
=====				
ID = 3 (0108):	253.74	7.761	3.00	32.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->			
Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 / 0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 / 0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

		<---- hydrograph ---->				<-pipe / channel->	
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.74	7.76	3.00	32.46		1.44	1.20
OUTFLOW: ID= 1 (0506)	253.74	7.36	3.08	32.46		1.42	1.20

CALIB		Area (ha)= 3.90		Curve Number (CN)= 71.0	
NASHYD (5061)		Ia (mm)= 8.00		# of Linear Res. (N)= 3.00	
ID= 1 DT= 5.0 min		U.H. Tp(hrs)= 0.62			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70

0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW	(cms)= 0.129 (i)
TIME TO PEAK	(hrs)= 3.583
RUNOFF VOLUME	(mm)= 21.745
TOTAL RAINFALL	(mm)= 67.600
RUNOFF COEFFICIENT	= 0.322

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

CALIB		Area (ha)= 7.80	
STANDHYD (5062)		Total Imp(%)= 65.00	
ID= 1 DT= 5.0 min		Dir. Conn.(%)= 53.00	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 5.07	2.73			
Dep. Storage	(mm)= 6.00	8.00			
Average Slope	(%)= 1.00	1.00			
Length	(m)= 228.04	40.00			
Mannings n	= 0.013	0.250			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70

Max.Eff.Inten.(mm/hr)=	105.46	73.65
over (min)	5.00	15.00
Storage Coeff. (min)=	4.10 (ii)	13.92 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.08
TOTALS		
PEAK FLOW (cms)=	1.18	0.31
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	61.60	27.36
TOTAL RAINFALL (mm)=	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.40

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5061):	3.90	0.129	3.58	21.75
+ ID2= 2 (5062):	7.80	1.430	3.00	45.50
=====				
ID = 3 (0109):	11.70	1.472	3.00	37.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0109):	11.70	1.472	3.00	37.58
+ ID2= 2 (0506):	253.74	7.357	3.08	32.46

=====

ID = 3 (0110): 265.44 8.197 3.08 32.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

NASHYD (5101) Area (ha)= 0.80 Curve Number (CN)= 66.0

ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 1.42

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.012 (i)

TIME TO PEAK (hrs)= 4.583

RUNOFF VOLUME (mm)= 18.648

TOTAL RAINFALL (mm)= 67.600

RUNOFF COEFFICIENT = 0.276

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

CALIB

STANDHYD (5102) Area (ha)= 0.90

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

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

ADD HYD (0115)

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5101):	0.80	0.012	4.58	18.65
+ ID2= 2 (5102):	0.90	0.126	3.00	36.69
ID = 3 (0115):	1.70	0.127	3.00	28.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)

IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 / 0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 / 0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88

|ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 0.45 0.45

Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00

Length (m)= 77.46 40.00

Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 50.94

over (min) 5.00 15.00

Storage Coeff. (min)= 2.15 (ii) 13.53 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.31 0.08

TOTALS

PEAK FLOW (cms)= 0.09 0.04 0.126 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00

RUNOFF VOLUME (mm)= 61.60 23.29 36.69

TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.34 0.54

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 66.0 Ia = Dep. Storage (Above)

1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

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

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0115)	1.70	0.13	3.00	28.20	0.02	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.09	3.08	28.20	0.02	0.24

CALIB

NASHYD (5111) Area (ha)= 1.90 Curve Number (CN)= 67.0

ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.56

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.059 (i)

TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 19.230
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.284

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

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min

Area (ha)= 1.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 85.63 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 58.91
over (min) 5.00 15.00
Storage Coeff. (min)= 2.28 (ii) 13.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

41.13 82.12 0.0900 /0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 /0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

AREA QPEAK TPEAK R.V. <-pipe / channel->
(ha) (cms) (hrs) (mm) MAX DEPTH MAX VEL
INFLOW : ID= 2 (0117) 4.70 0.27 3.00 27.08 0.50 0.34
OUTFLOW: ID= 1 (0512) 4.70 0.16 3.33 27.08 0.41 0.30

CALIB
NASHYD (5121)
ID= 1 DT= 5.0 min

Area (ha)= 0.70 Curve Number (CN)= 71.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.14

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

TOTALS
PEAK FLOW (cms)= 0.11 0.06 0.162 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 26.73 38.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40 0.58

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5111):	1.90	0.059	3.50	19.23
+ ID2= 2 (5112):	1.10	0.162	3.00	38.93
=====				
ID = 3 (0116):	3.00	0.184	3.00	26.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0116):	3.00	0.184	3.00	26.45
+ ID2= 2 (0511):	1.70	0.092	3.08	28.20
=====				
ID = 3 (0117):	4.70	0.274	3.00	27.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning
0.00	80.80	0.0900
9.73	80.46	0.0900
14.10	82.04	0.0900
17.18	82.28	0.0900

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 4.250
RUNOFF VOLUME (mm)= 21.742
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.322

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

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min

Area (ha)= 3.20
Total Imp(%)= 60.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.92 1.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 146.06 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 72.02
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.14 (ii) 13.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

TOTALS

PEAK FLOW (cms)= 0.43 0.15 0.555 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.10 43.31
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40 0.64

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5121):		0.70	0.015	4.25	21.74
+ ID2= 2 (5122):		3.20	0.555	3.00	43.31
=====					
ID = 3 (0118):		3.90	0.557	3.00	39.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0118):		3.90	0.557	3.00	39.44
+ ID2= 2 (0512):		4.70	0.160	3.33	27.08
=====					
ID = 3 (0119):		8.60	0.674	3.00	32.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)

ID1= 1 (0110):		265.44	8.197	3.08	32.68
+ ID2= 2 (0119):		8.60	0.674	3.00	32.68
=====					
ID = 3 (0120):		274.04	8.642	3.00	32.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (6011)					
ID= 1 DT= 5.0 min		Area	(ha)=	44.10	Curve Number (CN)= 62.0
		Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)=	0.83		

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70

1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.881 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

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

CALIB					
STANDHYD (6012)		Area (ha)= 11.00			
ID= 1 DT= 5.0 min		Total Imp(%)= 28.00		Dir. Conn.(%)= 16.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.08	7.92
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	270.80	40.00
Mannings n	=	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70

1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 37.03
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.55 (ii) 17.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06

TOTALS

PEAK FLOW (cms)= 0.50 0.45 0.795 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 19.00 25.82
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.28 0.38

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

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

ADD HYD (0124)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):		44.10	0.881	3.83	16.50
+ ID2= 2 (6012):		11.00	0.795	3.00	25.82
=====					
ID = 3 (0124):		55.10	1.120	3.50	18.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (6021)		Area (ha)=	43.60	Curve Number (CN)=	62.0
ID= 1 DT= 5.0 min		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	0.95		

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.789 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

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

CALIB	STANDHYD (6022)	ID= 1 DT= 5.0 min
Area (ha)= 12.90	Total Imp(%)= 35.00	Dir. Conn.(%)= 23.00
IMPERVIOUS (ha)= 4.51	PERVIOUS (i) (ha)= 8.38	
Dep. Storage (mm)= 6.00		
Average Slope (%)= 1.00		
Length (m)= 293.26		
Mannings n = 0.013		

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 38.11
over (min) 5.00 20.00
Storage Coeff. (min)= 4.77 (ii) 17.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

PEAK FLOW (cms)= 0.83 0.49 1.157 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 19.26 28.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.28 0.43

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

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

ADD HYD (0125)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0124):	43.60	0.789	4.00	16.50
+ ID2= 2 (0125):	12.90	1.157	3.00	28.99
ID = 3 (0125):	56.50	1.292	3.00	19.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0124):	55.10	1.120	3.50	18.36
+ ID2= 2 (0125):	56.50	1.292	3.00	19.35
ID = 3 (0126):	111.60	2.273	3.00	18.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)		Routing time step (min)'= 5.00
IN= 2----> OUT= 1		
----- DATA FOR SECTION (2135.9) -----		
Distance	Elevation	Manning
0.00	92.58	0.1400
8.54	92.59	0.1400
22.11	92.47	0.1400
48.74	91.83	0.1400
67.59	91.58	0.1400
86.45	91.21	0.1400
103.50	90.80	0.1400
118.09	90.23	0.1400
127.84	90.09	0.1400 / 0.0700 Main Channel
129.84	89.59	0.0700 Main Channel
130.34	90.09	0.0700 / 0.1400 Main Channel
140.57	90.14	0.1400
161.87	90.11	0.1400
177.03	90.04	0.1400
188.67	89.87	0.1400
199.59	90.31	0.1400
212.02	90.96	0.1400
225.58	91.35	0.1400
252.71	91.66	0.1400
274.11	91.86	0.1400

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64

1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	2.27	3.00	18.86	0.60
OUTFLOW: ID= 1 (0603)	111.60	1.51	4.58	18.86	0.55

CALIB	Area (ha)= 19.00	Curve Number (CN)= 72.0
NASHYD (6031)	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 1.32	

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70

1.417 4.06 | 2.917 105.46 | 4.417 5.41 | 5.92 2.70
1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.369 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 22.428
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.332

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

CALIB
STANDHYD (6032)
ID= 1 DT= 5.0 min

Area (ha)= 10.73
Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.00 7.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 267.46 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 51.33
over (min) 5.00 20.00
Storage Coeff. (min)= 4.51 (ii) 15.86 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.07

TOTALS
PEAK FLOW (cms)= 0.45 0.65 0.895 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.60 31.00
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38 0.46

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

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

ADD HYD (0127)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6031): 19.00 0.369 4.50 22.43
+ ID2= 2 (6032): 10.73 0.895 3.00 31.00
=====

ID = 3 (0127): 29.73 0.934 3.00 25.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6131)
ID= 1 DT= 5.0 min

Area (ha)= 1.77 Curve Number (CN)= 66.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.22

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06

0.250 2.70 | 1.750 6.76 | 3.250 14.87 | 4.75 4.06
0.333 2.70 | 1.833 6.76 | 3.333 14.87 | 4.83 4.06
0.417 2.70 | 1.917 6.76 | 3.417 14.87 | 4.92 4.06
0.500 2.70 | 2.000 6.76 | 3.500 14.87 | 5.00 4.06
0.583 4.06 | 2.083 8.11 | 3.583 6.76 | 5.08 2.70
0.667 4.06 | 2.167 8.11 | 3.667 6.76 | 5.17 2.70
0.750 4.06 | 2.250 8.11 | 3.750 6.76 | 5.25 2.70
0.833 4.06 | 2.333 8.11 | 3.833 6.76 | 5.33 2.70
0.917 4.06 | 2.417 8.11 | 3.917 6.76 | 5.42 2.70
1.000 4.06 | 2.500 8.11 | 4.000 6.76 | 5.50 2.70
1.083 4.06 | 2.583 40.56 | 4.083 5.41 | 5.58 2.70
1.167 4.06 | 2.667 40.56 | 4.167 5.41 | 5.67 2.70
1.250 4.06 | 2.750 73.01 | 4.250 5.41 | 5.75 2.70
1.333 4.06 | 2.833 73.01 | 4.333 5.41 | 5.83 2.70
1.417 4.06 | 2.917 105.46 | 4.417 5.41 | 5.92 2.70
1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.101 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 18.628
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.276

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

CALIB
STANDHYD (6222)
ID= 1 DT= 5.0 min

Area (ha)= 2.02
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.58 0.44
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 116.05 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06

Max.Eff.Inten.(mm/hr)= 105.46 35.47
over (min) 5.00 20.00
Storage Coeff. (min)= 2.73 (ii) 15.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.07

TOTALS
PEAK FLOW (cms)= 0.46 0.03 0.475 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 20.99 52.66
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.31 0.78

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6142)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 69.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.04 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 81.09
over (min) 5.00 15.00
Storage Coeff. (min)= 2.50 (ii) 11.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS

PEAK FLOW (cms)= 0.22 0.06 0.270 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 25.32 43.46
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.37 0.64

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6152)
ID= 1 DT= 5.0 min

Area (ha)= 2.14
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PVIOUS (i)

Surface Area (ha)= 1.67 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 119.44 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 35.47
over (min) 5.00 20.00
Storage Coeff. (min)= 2.78 (ii) 15.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07

TOTALS

PEAK FLOW (cms)= 0.48 0.03 0.502 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 20.99 52.66
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.31 0.78

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6182)
ID= 1 DT= 5.0 min

Area (ha)= 1.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PVIOUS (i)

Surface Area (ha)= 1.16 0.33
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 99.67 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 141.15
over (min) 5.00 15.00
Storage Coeff. (min)= 2.50 (ii) 10.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.10

TOTALS

PEAK FLOW (cms)= 0.22 0.08 0.288 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 31.69 46.64
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.47 0.69

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302)
ID= 1 DT= 5.0 min

Area (ha)= 0.86
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PVIOUS (i)

Surface Area (ha)= 0.81 0.05
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.72 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 34.29
over (min) 5.00 5.00
Storage Coeff. (min)= 2.12 (ii) 4.95 (ii)

Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.31 0.22

PEAK FLOW (cms)= 0.24 0.00 0.241 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 58.92
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.87

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6172)
ID= 1 DT= 5.0 min

Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70

1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 161.84
over (min) 5.00 15.00
Storage Coeff. (min)= 2.85 (ii) 10.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.10

PEAK FLOW (cms)= 0.34 0.15 0.464 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 36.48 49.04
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.54 0.73

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0342)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6142): 1.50 0.270 3.00 43.46
+ ID2= 2 (6152): 2.14 0.502 3.00 52.66
=====

ID = 3 (0342): 3.64 0.772 3.00 48.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0342): 3.64 0.772 3.00 48.87
+ ID2= 2 (6172): 2.31 0.464 3.00 49.04
=====

ID = 1 (0342): 5.95 1.237 3.00 48.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0342): 5.95 1.237 3.00 48.93
+ ID2= 2 (6182): 1.49 0.288 3.00 46.64
=====

ID = 3 (0342): 7.44 1.524 3.00 48.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0342): 7.44 1.524 3.00 48.47
+ ID2= 2 (6222): 2.02 0.475 3.00 52.66
=====

ID = 1 (0342): 9.46 1.999 3.00 49.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0342): 9.46 1.999 3.00 49.37
+ ID2= 2 (6302): 0.86 0.241 3.00 58.92
=====

ID = 3 (0342): 10.32 2.240 3.00 50.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6212)
ID= 1 DT= 5.0 min

Area (ha)= 1.15
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 87.56 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.31 (ii) 16.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.06

PEAK FLOW (cms)= 0.22 0.02 0.230 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 45.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.68

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6232)
ID= 1 DT= 5.0 min

Area (ha)= 0.85
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 0.55 0.30
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.28 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.11 (ii) 16.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.31 0.06

TOTALS
PEAK FLOW (cms)= 0.16 0.01 0.170 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 45.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.68

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

Max.Eff.Inten.(mm/hr)= 105.46 48.04
over (min) 5.00 15.00
Storage Coeff. (min)= 2.19 (ii) 13.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS
PEAK FLOW (cms)= 0.17 0.03 0.195 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.90 48.11
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0346)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	10.32	2.240	3.00	50.16
+ ID2= 2 (0488):	2.00	0.400	3.00	45.99
=====				
ID = 3 (0346):	12.32	2.640	3.00	49.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0346):	12.32	2.640	3.00	49.49
+ ID2= 2 (6131):	1.77	0.101	3.08	18.63
=====				
ID = 1 (0346):	14.09	2.725	3.00	45.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.

ADD HYD (0488)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6212):	1.15	0.230	3.00	45.99
+ ID2= 2 (6232):	0.85	0.170	3.00	45.99
=====				
ID = 3 (0488):	2.00	0.400	3.00	45.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6262)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	0.96	
	Total Imp(%)=	60.00	Dir. Conn.(%)=	60.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	0.58	0.38	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	80.00	40.00	
Mannings n	=	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0346):	14.09	2.725	3.00	45.61
+ ID2= 2 (6262):	0.96	0.195	3.00	48.11
=====				
ID = 3 (0346):	15.05	2.921	3.00	45.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0447)				
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1070	0.3146
	0.0150	0.1715	0.7100	0.8031

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0346) 15.050 2.921 3.00 45.77
OUTFLOW: ID= 1 (0447) 15.050 0.310 3.75 45.58

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.61
TIME SHIFT OF PEAK FLOW (min)= 45.00
MAXIMUM STORAGE USED (ha.m.)= 0.4792

CALIB				
STANDHYD (6202)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	1.26	
	Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.18	0.08	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	91.65	40.00	
Mannings n	=	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 34.29
over (min) 5.00 10.00
Storage Coeff. (min)= 2.37 (ii) 5.20 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.16

TOTALS
PEAK FLOW (cms)= 0.35 0.01 0.351 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 58.92
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.87

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0491)				
IN= 2----> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
OUTFLOW (cms)		STORAGE (ha.m.)		OUTFLOW (cms)
0.0000		0.0000		0.0580
0.0090		0.0366		0.0000
AREA (ha)		QPEAK (cms)		TPEAK (hrs)
INFLOW : ID= 2 (6202)		1.260		0.351
OUTFLOW: ID= 1 (0491)		1.260		0.027
PEAK FLOW REDUCTION [Qout/Qin](%)= 7.82		TIME SHIFT OF PEAK FLOW (min)= 35.00		MAXIMUM STORAGE USED (ha.m.)= 0.0548

CALIB			
STANDHYD (6062)			
ID= 1 DT= 5.0 min			
Area (ha)= 1.98		Dir. Conn.(%)= 65.00	
Total Imp(%)= 65.00			

Surface Area (ha)= 1.29		PERVIOUS (i) 0.69	
Dep. Storage (mm)= 6.00		8.00	
Average Slope (%)= 1.00		1.00	
Length (m)= 114.89		40.00	
Mannings n = 0.013		0.250	

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.43
over (min) 5.00 20.00
Storage Coeff. (min)= 2.72 (ii) 17.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.06
TOTALS
PEAK FLOW (cms)= 0.37 0.03 0.394 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 46.00
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.68

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6122)			
ID= 1 DT= 5.0 min			
Area (ha)= 2.18			
Total Imp(%)= 94.00			
Dir. Conn.(%)= 94.00			
Surface Area (ha)= 2.05		PERVIOUS (i) 0.13	
Dep. Storage (mm)= 6.00		8.00	
Average Slope (%)= 1.00		1.00	
Length (m)= 120.55		40.00	
Mannings n = 0.013		0.250	

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 34.29
over (min) 5.00 10.00
Storage Coeff. (min)= 2.80 (ii) 5.63 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.28 0.15
TOTALS
PEAK FLOW (cms)= 0.59 0.01 0.605 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 58.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.87

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1000)				
IN= 2----> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
OUTFLOW (cms)		STORAGE (ha.m.)		OUTFLOW (cms)
0.0000		0.0000		0.1000
0.0159		0.0631		0.0000
AREA (ha)		QPEAK (cms)		TPEAK (hrs)
INFLOW : ID= 2 (6122)		2.180		0.605
OUTFLOW: ID= 1 (1000)		2.180		0.048
PEAK FLOW REDUCTION [Qout/Qin](%)= 7.89		TIME SHIFT OF PEAK FLOW (min)= 35.00		MAXIMUM STORAGE USED (ha.m.)= 0.0946

ADD HYD (0493)				
1 + 2 = 3				
ID1= 1 (1000):		2.18	0.048	3.58
+ ID2= 2 (0491):		1.26	0.027	3.58
ID = 3 (0493):		3.44	0.075	3.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0493)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0493): 3.44 0.075 3.58 58.33
+ ID2= 2 (6062): 1.98 0.394 3.00 46.00

ID = 1 (0493): 5.42 0.438 3.00 53.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0319)
IN= 2----> OUT= 1 Routing time step (min)*= 5.00

----- DATA FOR SECTION (2135.9) -----
Distance Elevation Manning
0.00 92.50 0.0700
36.57 92.00 0.0700
90.03 91.00 0.0700
124.58 90.00 0.0700 /0.0350 Main Channel
128.34 89.59 0.0350 Main Channel
129.84 89.59 0.0350 Main Channel
132.39 90.00 0.0350 /0.0700 Main Channel
163.76 91.00 0.0700
187.47 91.00 0.0700
203.83 91.00 0.0700
306.44 92.00 0.0700

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 89.69 .215E+03 0.1 0.46 33.36
0.20 89.79 .579E+03 0.4 0.67 22.75
0.31 89.90 .109E+04 1.0 0.84 18.13
0.41 90.00 .175E+04 1.9 0.99 15.37
0.54 90.13 .324E+04 4.0 1.14 13.36
0.68 90.27 .581E+04 7.3 1.15 13.32
0.81 90.40 .945E+04 11.9 1.15 13.29
0.94 90.53 .142E+05 18.0 1.17 13.10
1.08 90.67 .200E+05 26.0 1.19 12.79
1.21 90.80 .268E+05 36.0 1.23 12.42
1.34 90.93 .348E+05 48.2 1.27 12.03
1.48 91.07 .464E+05 58.3 1.15 13.27
1.61 91.20 .629E+05 78.8 1.15 13.30
1.74 91.33 .819E+05 104.3 1.17 13.08
1.88 91.47 .103E+06 135.3 1.20 12.74
2.01 91.60 .128E+06 172.1 1.24 12.35
2.14 91.73 .154E+06 215.1 1.28 11.94
2.28 91.87 .183E+06 264.7 1.32 11.54
2.41 92.00 .215E+06 321.3 1.37 11.15

Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.08
TOTALS
PEAK FLOW (cms)= 0.10 0.01 0.107 (iii)
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 27.90 54.17
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.80

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min
Area (ha)= 2.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0493) 5.42 0.44 3.00 53.83 0.21 0.67
OUTFLOW: ID= 1 (0319) 5.42 0.21 3.08 53.82 0.14 0.51

CALIB
STANDHYD (6162)
ID= 1 DT= 5.0 min
Area (ha)= 0.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.04
over (min) 5.00 15.00
Storage Coeff. (min)= 1.73 (ii) 13.38 (ii)

1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 192.38
over (min) 5.00 10.00
Storage Coeff. (min)= 2.91 (ii) 9.60 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.28 0.11

TOTALS
PEAK FLOW (cms)= 0.36 0.21 0.572 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 44.05 52.82
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.65 0.78

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6242)
ID= 1 DT= 5.0 min
Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.04
over (min) 5.00 15.00
Storage Coeff. (min)= 2.14 (ii) 13.79 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS

PEAK FLOW (cms)= 0.20 0.02 0.217 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.90 54.17
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.80

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0489)						
1 + 2 = 3						
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (6102):		2.49	0.572	3.00	52.82	
+ ID2= 2 (6162):		0.44	0.107	3.00	54.17	
=====						
ID = 3 (0489):		2.93	0.679	3.00	53.02	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0489)							
3 + 2 = 1							
		AREA	QPEAK	TPEAK	R.V.		

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 55.30
over (min) 5.00 15.00
Storage Coeff. (min)= 2.57 (ii) 13.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS

PEAK FLOW (cms)= 0.31 0.06 0.358 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 31.83 51.17
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.47 0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0319):	5.42	0.213	3.08	53.82
+ ID2= 2 (0447):	15.05	0.310	3.75	45.58
=====				
ID = 3 (0318):	20.47	0.470	3.50	47.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)							
3 + 2 = 1							
		AREA	QPEAK	TPEAK	R.V.		

		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0489):		2.93	0.679	3.00	53.02
+ ID2= 2 (6242):		0.89	0.217	3.00	54.17
=====					
ID = 1 (0489):		3.82	0.896	3.00	53.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0490)							
IN= 2---> OUT= 1							
DT= 5.0 min							
				OVERFLOW IS OFF			
		OUTFLOW	STORAGE	OUTFLOW	STORAGE		
		(cms)	(ha.m.)	(cms)	(ha.m.)		
		0.0000	0.0000	0.1760	0.2330		
		0.0280	0.0927	0.0000	0.0000		
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
INFLOW : ID= 2 (0489)		3.820	0.896	3.00	53.29		
OUTFLOW: ID= 1 (0490)		3.820	0.083	3.75	53.07		
						PEAK FLOW REDUCTION [Qout/Qin](%)= 9.21	
						TIME SHIFT OF PEAK FLOW (min)= 45.00	
						MAXIMUM STORAGE USED (ha.m.)= 0.1444	

CALIB							
STANDHYD (6192)							
ID= 1 DT= 5.0 min		Area	(ha)= 1.64				
		Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00				

		IMPERVIOUS	PERVIOUS (i)				
Surface Area		(ha)= 1.07	0.57				
Dep. Storage		(mm)= 6.00	8.00				
Average Slope		(%)= 1.00	1.00				
Length		(m)= 104.56	40.00				
Mannings n		= 0.013	0.250				

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 55.30
over (min) 5.00 15.00
Storage Coeff. (min)= 2.57 (ii) 13.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS

PEAK FLOW (cms)= 0.31 0.06 0.358 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 31.83 51.17
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.47 0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0319):	5.42	0.213	3.08	53.82
+ ID2= 2 (0447):	15.05	0.310	3.75	45.58
=====				
ID = 3 (0318):	20.47	0.470	3.50	47.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)							
3 + 2 = 1							
		AREA	QPEAK	TPEAK	R.V.		

		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0318):		20.47	0.470	3.50	47.76
+ ID2= 2 (0490):		3.82	0.083	3.75	53.07
=====					
ID = 1 (0318):		24.29	0.552	3.58	48.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0318):		24.29	0.552	3.58	48.59
+ ID2= 2 (6192):		1.64	0.358	3.00	51.17
=====					
ID = 3 (0318):		25.93	0.739	3.00	48.76

0.00 86.75 0.0900
3.09 87.40 0.0900
18.33 87.41 0.0900
35.33 86.99 0.0900
73.84 86.75 0.0900
103.33 86.41 0.0900
120.33 86.11 0.0900
129.46 86.13 0.0900
143.37 85.32 0.0900
154.33 85.02 0.0900
161.57 85.09 0.0900
163.05 84.78 0.0900 /0.0700 Main Channel
166.55 83.78 0.0700 Main Channel
168.05 84.78 0.0700 /0.1100 Main Channel
172.02 85.29 0.1100
191.39 86.19 0.1100
270.18 85.78 0.1100
296.33 86.36 0.1100
324.34 86.68 0.1100
368.56 87.05 0.1100

----- TRAVEL TIME TABLE -----					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

		----- hydrograph -----			<-pipe / channel->		
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)		167.26	2.50	4.42	24.68	1.96	0.09
OUTFLOW: ID= 1 (0604)		167.26	1.82	5.00	24.67	1.88	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB		Area (ha)=	1.70	Curve Number (CN)=	79.0
NASHYD (6041)		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)=	4.12		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.017 (i)
TIME TO PEAK (hrs)= 7.583
RUNOFF VOLUME (mm)= 27.939
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.413

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

CALIB		Area (ha)=	22.30
STANDHYD (6042)		Total Imp(%)=	65.00
ID= 1 DT= 5.0 min		Dir. Conn.(%)=	53.00

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

ADD HYD (0129)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3					
ID1= 1 (0041):		1.70	0.017	7.58	27.94
+ ID2= 2 (6042):		22.30	4.162	3.00	48.60
ID = 3 (0129):		24.00	4.162	3.00	47.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3					
ID1= 1 (0129):		24.00	4.162	3.00	47.14
+ ID2= 2 (0604):		167.26	1.819	5.00	24.67
ID = 3 (0130):		191.26	4.757	3.00	27.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)		Routing time step (min)'=	5.00
IN= 2--> OUT= 1			

----- DATA FOR SECTION (801.4) -----			
Distance	Elevation	Manning	
0.00	82.95	0.1100	
3.78	82.95	0.1100	
9.24	82.49	0.1100	
50.67	82.10	0.1100	
105.12	82.17	0.1100	
119.34	81.56	0.1100	
150.67	81.66	0.1100	
157.23	82.37	0.1100	
190.03	82.57	0.1100	
223.75	82.27	0.1100	
252.32	82.50	0.1100	
254.65	81.95	0.1100 /0.0700	Main Channel
258.15	80.95	0.0700	Main Channel
259.65	81.95	0.0700 /0.1100	Main Channel
263.15	82.90	0.1100	
278.14	82.80	0.1100	
282.35	81.68	0.1100	

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.49 7.81
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Lengths (m)= 385.57 40.00
Mannings n = 0.013 0.250
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70
TOTALS							
Max.Eff.Inten.(mm/hr)=	105.46	91.39					
over (min)	5.00	15.00					
Storage Coeff. (min)=	5.62 (ii)	14.63 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.20	0.08					
PEAK FLOW (cms)=	3.25	1.10	4.162 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08	3.00				
RUNOFF VOLUME (mm)=	61.60	33.95	48.60				
TOTAL RAINFALL (mm)=	67.60	67.60	67.60				
RUNOFF COEFFICIENT =	0.91	0.50	0.72				

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.08	81.03	.125E+02	0.0	0.11	104.30	
0.17	81.12	.499E+02	0.0	0.18	65.70	
0.25	81.20	.112E+03	0.0	0.24	50.14	
0.33	81.28	.199E+03	0.1	0.29	41.39	
0.42	81.37	.312E+03	0.1	0.34	35.67	
0.50	81.45	.449E+03	0.2	0.38	31.59	
0.58	81.53	.611E+03	0.4	0.42	28.50	
0.67	81.62	.117E+04	0.5	0.33	36.11	
0.75	81.70	.316E+04	1.1	0.24	49.12	
0.83	81.78	.560E+04	2.1	0.27	45.15	
0.92	81.87	.827E+04	3.4	0.30	40.03	
1.00	81.95	.112E+05	5.2	0.33	35.88	
1.10	82.05	.151E+05	8.0	0.38	31.68	
1.21	82.16	.207E+05	8.8	0.30	39.37	
1.31	82.26	.306E+05	14.0	0.33	36.36	
1.41	82.36	.433E+05	20.3	0.34	35.59	
1.52	82.47	.606E+05	28.4	0.34	35.57	
1.62	82.57	.828E+05	41.0	0.36	33.68	
1.73	82.68	.109E+06	60.1	0.39	30.35	

<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0130)	191.26	4.76	3.00	27.49	0.98	0.32
OUTFLOW: ID= 1 (0605)	191.26	2.03	5.00	27.49	0.83	0.26

CALIB						
NASHYD (6111)	Area (ha)=	0.60	Curve Number (CN)=	77.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	1.08				

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06

0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70
Max.Eff.Inten.(mm/hr)=	105.46	79.47					
over (min)	5.00	15.00					
Storage Coeff. (min)=	4.52 (ii)	14.05 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.23	0.08					
PEAK FLOW (cms)=	1.52	0.50	1.939 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08	3.00				
RUNOFF VOLUME (mm)=	61.60	30.07	45.83				
TOTAL RAINFALL (mm)=	67.60	67.60	67.60				
RUNOFF COEFFICIENT =	0.91	0.44	0.68				

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)						
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.		
	(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (6111):	0.60	0.016	4.17	26.22		
+ ID2= 2 (6112):	10.80	1.939	3.00	45.83		
ID = 3 (0137):	11.40	1.941	3.00	44.80		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.016 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 26.217
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.388

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

CALIB						
STANDHYD (6112)	Area (ha)=	10.80				
ID= 1 DT= 5.0 min	Total Imp(%)=	62.00	Dir. Conn.(%)=	50.00		

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	6.70		4.10	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	268.33		40.00	
Mannings n	=	0.013		0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06

ADD HYD (0139)						
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.		
	(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (0137):	11.40	1.941	3.00	44.80		
+ ID2= 2 (0605):	191.26	2.032	5.00	27.49		
ID = 3 (0139):	202.66	3.356	3.00	28.46		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB						
NASHYD (6051)	Area (ha)=	0.40	Curve Number (CN)=	66.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	1.31				

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.006 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 18.645
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.276

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

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min

Area (ha)= 15.50
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 10.23 5.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 54.69
over (min)= 5.00 20.00
Storage Coeff. (min)= 5.04 (ii) 16.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06
TOTALS
PEAK FLOW (cms)= 2.33 0.47 2.651 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 24.02 44.31
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.36 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0051): 0.40 0.006 4.50 18.64
+ ID2= 2 (0052): 15.50 2.651 3.00 44.31
ID = 3 (0131): 15.90 2.652 3.00 43.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0131): 15.90 2.652 3.00 43.67
+ ID2= 2 (0139): 202.66 3.356 3.00 28.46
ID = 3 (0132): 218.56 6.009 3.00 29.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) -----
Distance Elevation Manning
0.00 81.70 0.1100
3.84 81.72 0.1100
5.87 80.72 0.1100
9.38 81.42 0.1100
49.64 81.07 0.1100
80.61 80.72 0.1100
85.61 81.14 0.1100
93.32 80.00 0.1100
95.04 80.45 0.1100
102.72 80.66 0.1100
110.13 78.93 0.1100 /0.0700 Main Channel

118.05 78.63 0.0700 Main Channel
124.40 78.89 0.0700 /0.1100 Main Channel
132.18 79.61 0.1100
139.34 79.23 0.1100
144.67 79.43 0.1100
149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70
2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0132) 218.56 6.01 3.00 29.57 0.65 0.68
OUTFLOW: ID= 1 (0530) 218.56 4.65 3.08 29.57 0.59 0.64

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

Area (ha)= 5.80
Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 3.48 2.32
Dep. Storage (mm)= 6.00 8.00

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.56	4.651	3.08	29.57
+ ID2= 2 (5302):	5.80	0.931	3.00	41.68
=====				
ID = 3 (0134):	224.36	5.187	3.00	29.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	274.04	8.642	3.00	32.68
+ ID2= 2 (0134):	224.36	5.187	3.00	29.88
=====				
ID = 3 (0135):	498.40	13.829	3.00	31.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->				
Distance	Elevation	Manning		
0.00	79.36	0.0900		
7.45	79.32	0.0900		
13.77	79.27	0.0900		
20.24	79.24	0.0900		
27.28	79.26	0.0900		
34.16	79.13	0.0900		
40.79	79.05	0.0900		
47.58	79.05	0.0900		
54.30	79.07	0.0900		
60.87	79.24	0.0900		
71.39	79.48	0.0900		
73.53	78.96	0.0900		
76.96	78.07	0.0900		
82.21	77.08	0.0900 / 0.0700	Main Channel	
85.82	76.28	0.0700	Main Channel	
89.97	76.89	0.0700	Main Channel	
91.35	77.38	0.0700 / 0.0900	Main Channel	
95.27	78.68	0.0900		
98.44	79.63	0.0900		
102.89	79.89	0.0900		

0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.142 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 23.865
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.353

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

CALIB	
STANDHYD (5072)	
ID= 1 DT= 5.0 min	
Area (ha)=	40.50
Total Imp(%)=	45.00
Dir. Conn.(%)=	30.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	18.23		22.28
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	519.62		40.00
Mannings n	0.013		0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->		<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0135)	498.40	13.83	3.00
OUTFLOW: ID= 1 (0507)	498.40	10.85	3.25
		31.42	1.67
			0.79

CALIB	
NASHYD (5071)	
ID= 1 DT= 5.0 min	
Area (ha)=	8.40
Ia (mm)=	8.00
U.H. Tp(hrs)=	1.72
Curve Number (CN)=	74.0
# of Linear Res.(N)=	3.00

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06

0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 73.24
over (min) 5.00 20.00
Storage Coeff. (min)= 6.72 (ii) 16.56 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

TOTALS
PEAK FLOW (cms)= 3.24 2.22 4.780 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 28.60 38.50
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.42 0.57

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5071):	8.40	0.142	5.00	23.86
+ ID2= 2 (5072):	40.50	4.780	3.00	38.50
=====				
ID = 3 (0121):	48.90	4.790	3.00	35.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	48.90	4.790	3.00	35.99

+ ID2= 2 (0507): 498.40 10.851 3.25 31.42

=====

ID = 3 (0122): 547.30 13.934 3.17 31.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min

AREA (ha)= 253.60
QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 47.57

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18

3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18

7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.15
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.14
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15
10.67	0.00	42.00	0.26	73.33	0.62	104.67	0.16	136.00	0.15
10.75	0.00	42.08	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15
10.92	0.00	42.25	0.26	73.58	0.60	104.92	0.16	136.25	0.15
11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15
11.17	0.00	42.50	0.26	73.83	0.59	105.17	0.16	136.50	0.15
11.25	0.00	42.58	0.26	73.92	0.57	105.25	0.16	136.58	0.15

15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12

19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11

23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.11
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.10

0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26

4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.28
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26

8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20

12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16

16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14

20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12

25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.1		

1.90 88.74 .101E+06 54.6 0.64 30.77
2.02 88.86 .124E+06 64.7 0.62 31.85

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 117.52 5.12 3.00 30.62 1.13 0.61
OUTFLOW: ID= 1 (0502) 117.52 3.73 3.83 30.62 1.04 0.75

----- CALIB -----
NASHYD (5691) Area (ha)= 2.30 Curve Number (CN)= 69.3
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.07

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.343 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 26.759
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.328

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

----- CALIB -----
NASHYD (5021) Area (ha)= 3.67 Curve Number (CN)= 68.8
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.43

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.211 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 28.731
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.352

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

----- CALIB -----
STANDHYD (0575) Area (ha)= 0.78
ID= 1 DT= 5.0 min Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

----- IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 72.24
over (min) 5.00 15.00
Storage Coeff. (min)= 1.91 (ii) 11.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

TOTALS
PEAK FLOW (cms)= 0.18 0.03 0.206 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 35.78 61.66
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.44 0.76

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

----- CALIB -----
STANDHYD (5082) Area (ha)= 0.71
ID= 1 DT= 5.0 min Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.52 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 68.80 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 80.08
over (min) 5.00 15.00
Storage Coeff. (min)= 1.85 (ii) 11.35 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

TOTALS
PEAK FLOW (cms)= 0.16 0.03 0.182 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 30.25 59.27

TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.37 0.73

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0568)
ID= 1 DT= 5.0 min

Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 42.58

1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.88
over (min)= 5.00 10.00
Storage Coeff. (min)= 1.89 (ii) 6.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.14

PEAK FLOW (cms)= 0.21 0.03 0.240 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 41.57 68.11
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.83

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5092)
ID= 1 DT= 5.0 min

Area (ha)= 1.73
Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90

over (min)= 5.00 15.00
Storage Coeff. (min)= 1.70 (ii) 13.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.08
TOTALS
PEAK FLOW (cms)= 0.12 0.01 0.133 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 25.39 58.01
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.31 0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min

Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26

0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.88
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.42 (ii) 11.74 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.31 0.12 0.410 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 41.57 58.79
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min

Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.80 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 35.37
over (min) 5.00 20.00
Storage Coeff. (min)= 3.56 (ii) 16.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.06

TOTALS

PEAK FLOW (cms)= 0.91 0.20 1.040 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 21.28 44.09
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.26 0.54

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5282)	Area (ha)= 2.08		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	
	IMPERVIOUS	PERVIOUS (i)	

Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 84.64
over (min) 5.00 15.00
Storage Coeff. (min)= 2.56 (ii) 11.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS

PEAK FLOW (cms)= 0.48 0.10 0.563 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 41.96 63.82
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.78

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	6.23	1.040	3.00	44.09
+ ID2= 2 (5021):	3.67	0.211	3.33	28.73
ID = 3 (0481):	9.90	1.154	3.00	38.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	9.90	1.154	3.00	38.40
+ ID2= 2 (5082):	0.71	0.182	3.00	59.27
ID = 1 (0481):	10.61	1.336	3.00	39.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	10.61	1.336	3.00	39.80
+ ID2= 2 (5092):	1.73	0.410	3.00	58.79
ID = 3 (0481):	12.34	1.746	3.00	42.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	12.34	1.746	3.00	42.46
+ ID2= 2 (0510):	0.76	0.240	3.00	68.11
ID = 1 (0481):	13.10	1.985	3.00	43.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	13.10	1.985	3.00	43.95
+ ID2= 2 (5282):	2.08	0.563	3.00	63.82
ID = 3 (0481):	15.18	2.548	3.00	46.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	15.18	2.548	3.00	46.67
+ ID2= 2 (0568):	0.53	0.133	3.00	58.01
ID = 1 (0481):	15.71	2.681	3.00	47.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	2.681	3.00	47.05
+ ID2= 2 (5691):	2.30	0.343	3.00	26.76
ID = 3 (0481):	18.01	3.024	3.00	44.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	3.024	3.00	44.46
+ ID2= 2 (0575):	0.78	0.206	3.00	61.66
ID = 1 (0481):	18.79	3.230	3.00	45.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

| NASHYD (0524)| Area (ha)= 7.22 Curve Number (CN)= 80.7
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.20

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 1.012 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 40.194
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.493

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

| CALIB
| NASHYD (0522)| Area (ha)= 3.31 Curve Number (CN)= 63.1
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
|-----| U.H. Tp(hrs)= 0.16

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

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

0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 42.58
over (min) 5.00 15.00
Storage Coeff. (min)= 2.48 (ii) 14.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS
PEAK FLOW (cms)= 0.43 0.05 0.467 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 25.39 58.02
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.31 0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (0519)| Area (ha)= 2.08
|ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00
|-----|

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00

TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.299 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 24.249
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.297

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

| CALIB
| STANDHYD (0580)| Area (ha)= 1.87
|ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00
|-----|

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 0.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 111.65 40.00
Mannings n = 0.013 0.250

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

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

Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 40.75
over (min) 5.00 20.00
Storage Coeff. (min)= 2.56 (ii) 15.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.07

TOTALS
PEAK FLOW (cms)= 0.48 0.05 0.508 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 24.35 57.66
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

| STANDHYD (0529)| Area (ha)= 1.80
|ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 48.76
over (min) 5.00 10.00
Storage Coeff. (min)= 2.45 (ii) 7.21 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14
PEAK FLOW (cms)= 0.49 0.04 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 0.533 (iii)
RUNOFF VOLUME (mm)= 75.60 24.35 64.32
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.79

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0298)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0519): 2.08 0.508 3.00 57.66
+ ID2= 2 (0529): 1.80 0.533 3.00 64.32
===== ID = 3 (0298): 3.88 1.041 3.00 60.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0298)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0298): 3.88 1.041 3.00 60.75
+ ID2= 2 (0580): 1.87 0.467 3.00 58.02
===== ID = 1 (0298): 5.75 1.508 3.00 59.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0296)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0298): 5.75 1.508 3.00 59.86
+ ID2= 2 (0522): 3.31 0.299 3.00 24.25
===== ID = 3 (0296): 9.06 1.807 3.00 46.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (0523)| Area (ha)= 6.61
|ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 154.85
over (min) 5.00 15.00
Storage Coeff. (min)= 3.62 (ii) 10.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
PEAK FLOW (cms)= 1.14 0.45 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 1.525 (iii)
RUNOFF VOLUME (mm)= 75.60 39.60 57.60
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.49 0.71

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0291)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0296): 9.06 1.807 3.00 46.85
+ ID2= 2 (0523): 6.61 1.525 3.00 57.60
===== ID = 3 (0291): 15.67 3.333 3.00 51.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (0525)| Area (ha)= 1.45
|ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 71.29

over (min) 5.00 15.00
Storage Coeff. (min)= 2.30 (ii) 12.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.33 0.06 0.381 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 35.32 61.50
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43 0.75

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0304)
1 + 2 = 3

ID1= 1 (0291): 15.67 3.333 3.00 51.39
+ ID2= 2 (0525): 1.45 0.381 3.00 61.50
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0295)
1 + 2 = 3

ID1= 1 (0304): 17.12 3.713 3.00 52.24
+ ID2= 2 (0524): 7.22 1.012 3.08 40.19
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0527)
ID= 1 DT= 5.0 min

Area (ha)= 1.68
Total Imp(%)= 76.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 1.28 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 105.83 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 207.52
over (min) 5.00 10.00
Storage Coeff. (min)= 2.40 (ii) 8.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

PEAK FLOW (cms)= 0.31 0.17 0.480 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 54.26 65.36
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.66 0.80

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0301)
1 + 2 = 3

ID1= 1 (0295): 24.34 4.650 3.00 48.67
+ ID2= 2 (0527): 1.68 0.480 3.00 65.36
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0520)
ID= 1 DT= 5.0 min

Area (ha)= 2.27
Total Imp(%)= 61.00 Dir. Conn.(%)= 61.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.38 0.89
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 123.02 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 75.92
over (min) 5.00 15.00
Storage Coeff. (min)= 2.63 (ii) 12.33 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

PEAK FLOW (cms)= 0.49 0.11 0.578 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 37.60 60.78
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.46 0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0305)
1 + 2 = 3

ID1= 1 (0301): 26.02 5.130 3.00 49.75
+ ID2= 2 (0520): 2.27 0.578 3.00 60.78
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0445)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.1400 0.8343
0.0195 0.2416 0.2360 1.0014
0.0700 0.5564 0.3420 1.6616

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0305) 28.290 5.708 3.00 50.63
OUTFLOW: ID= 1 (0445) 28.290 0.262 5.08 50.42

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.59
TIME SHIFT OF PEAK FLOW (min)=125.00

MAXIMUM STORAGE USED (ha.m.)= 1.1634

CALIB	
STANDHYD (0526)	Area (ha)= 0.94
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 0.73		0.21
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 79.16		40.00
Mannings n	= 0.013		0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	76.18
over (min)	5.00	10.00
Storage Coeff. (min)=	2.02 (ii)	6.77 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.31	0.14

TOTALS

PEAK FLOW (cms)=	0.26	0.03	0.292 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	37.73	67.26
TOTAL RAINFALL (mm)=	81.60	81.60	81.60

RUNOFF COEFFICIENT = 0.93 0.46 0.82

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0310)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.0476	0.0432
0.0096	0.0220	0.0579	0.0480
0.0206	0.0306	0.0671	0.0528
0.0297	0.0360	0.0000	0.0000

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0526)	0.940	0.292	3.00
OUTFLOW: ID= 1 (0310)	0.940	0.043	3.50

PEAK FLOW REDUCTION [Qout/Qin](%)= 14.58
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0412

CALIB	
STANDHYD (0574)	Area (ha)= 1.44
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 1.12		0.32
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 97.98		40.00
Mannings n	= 0.013		0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90

0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	62.49
over (min)	5.00	10.00
Storage Coeff. (min)=	2.29 (ii)	7.05 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.30	0.14

TOTALS

PEAK FLOW (cms)=	0.40	0.04	0.437 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	31.02	65.79
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT	= 0.93	0.38	0.81

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0307)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.0730	0.0642
0.0150	0.0327	0.0890	0.0712
0.0310	0.0455	0.1030	0.0784
0.0450	0.0536	0.0000	0.0000

AREA	QPEAK	TPEAK	R.V.

INFLOW : ID= 2 (0574)	(ha) 1.440	(cms) 0.437	(hrs) 3.00	(mm) 65.79
OUTFLOW: ID= 1 (0307)	1.440	0.065	3.50	65.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 14.96
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0613

ADD HYD (0306)				
1 + 2 = 3				

ID1= 1 (0307):	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
	1.44	0.065	3.50	65.41
+ ID2= 2 (0310):	0.94	0.043	3.50	66.65
=====				
ID = 3 (0306):	2.38	0.108	3.50	65.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (0571)	Area (ha)= 19.59
ID= 1 DT= 5.0 min	Total Imp(%)= 68.00 Dir. Conn.(%)= 50.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 13.32		6.27
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 361.39		40.00
Mannings n	= 0.013		0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26

1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 106.47
over (min) 5.00 15.00
Storage Coeff. (min)= 5.01 (ii) 13.49 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08

TOTALS

PEAK FLOW (cms)= 3.30 1.05 4.173 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.51 55.05
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.42 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0572)
ID= 1 DT= 5.0 min
Area (ha)= 11.31
Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90

0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 161.29
over (min) 5.00 15.00
Storage Coeff. (min)= 4.25 (ii) 11.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

TOTALS

PEAK FLOW (cms)= 1.94 0.93 2.736 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 48.02 61.81
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.59 0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0314)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0571): 19.59 4.173 3.00 55.05
+ ID2= 2 (0572): 11.31 2.736 3.00 61.81
===== ID = 3 (0314): 30.90 6.909 3.00 57.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (0573)
ID= 1 DT= 5.0 min
Area (ha)= 2.66
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.60 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 58.06
over (min) 5.00 15.00
Storage Coeff. (min)= 2.75 (ii) 13.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

TOTALS

PEAK FLOW (cms)= 0.56 0.11 0.653 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.03 58.97
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.42 0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

- CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0317)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0314): 30.90 6.909 3.00 57.53
+ ID2= 2 (0573): 2.66 0.653 3.00 58.97
===== ID = 3 (0317): 33.56 7.562 3.00 57.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0446)
IN= 2--> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW (cms) STORAGE (ha.m.) OUTFLOW (cms) STORAGE (ha.m.)
0.0000 0.0000 0.2300 1.1312
0.0230 0.3704 0.2810 1.3850
0.0900 0.8066 0.4120 2.2335
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW : ID= 2 (0317) 33.560 7.562 3.00 57.64
OUTFLOW: ID= 1 (0446) 33.560 0.314 5.17 56.97

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.16
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.6003

ADD HYD (0102)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0306): 2.38 0.108 3.50 65.90
+ ID2= 2 (0445): 28.29 0.262 5.08 50.42
===== ID = 3 (0102): 30.67 0.349 3.58 51.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	30.67	0.349	3.58	51.62
+ ID2= 2 (0446):	33.56	0.314	5.17	56.97
ID = 1 (0102):	64.23	0.645	4.00	54.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0102):	64.23	0.645	4.00	54.41
+ ID2= 2 (0481):	18.79	3.230	3.00	45.17
ID = 3 (0102):	83.02	3.496	3.00	52.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	83.02	3.496	3.00	52.32
+ ID2= 2 (0502):	117.52	3.728	3.83	30.62
ID = 1 (0102):	200.54	5.418	3.00	39.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 /0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 /0.0900	Main Channel
131.88	86.36	0.0900	

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.065 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 30.543
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.374

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

CALIB	
STANDHYD (5032)	Area (ha)= 12.20
ID= 1 DT= 5.0 min	Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.20	5.00
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	285.19	40.00
Mannings n =	0.013	0.250

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

140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ---->

<-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	200.54	5.42	3.00	39.60	1.24	1.07
OUTFLOW: ID= 1 (0503)	200.54	4.99	3.50	39.60	1.20	1.05

CALIB	
NASHYD (5031)	Area (ha)= 1.70 Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.82

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 94.01
over (min) 5.00 15.00
Storage Coeff. (min)= 4.35 (ii) 13.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08
TOTALS
PEAK FLOW (cms)= 1.96 0.75 2.582 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 36.53 54.89
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.45 0.67

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5031):	1.70	0.065	3.83	30.54

+ ID2= 2 (5032): 12.20 2.582 3.00 54.89
=====

ID = 3 (0103): 13.90 2.598 3.00 51.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0104) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
ID1= 1 (0103): 13.90 2.598 3.00 51.92
+ ID2= 2 (0503): 200.54 4.987 3.50 39.60
=====

ID = 3 (0104): 214.44 7.082 3.00 40.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0504) |
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900
217.10	82.90	0.0900
229.61	83.66	0.0900 / 0.0700
232.80	81.85	0.0700
243.24	83.87	0.0700
257.77	84.06	0.0900
312.01	83.52	0.0900
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900
513.93	82.96	0.0900
526.85	83.23	0.0900
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900

Main Channel
Main Channel
Main Channel

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

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67

1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.010 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 28.042
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.344

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

| CALIB
| STANDHYD (5042) | Area (ha)= 7.40
| ID= 1 DT= 5.0 min | Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.88	2.52
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	222.11	40.00
Mannings n =	0.013	0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26

0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0104) 214.44 7.08 3.00 40.40 0.80 0.33
OUTFLOW: ID= 1 (0504) 214.44 5.52 3.58 40.40 0.75 0.33

| CALIB
| NASHYD (5041) | Area (ha)= 0.30 Curve Number (CN)= 68.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.89

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26

1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 93.86
over (min) 5.00 15.00
Storage Coeff. (min)= 3.74 (ii) 12.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS
PEAK FLOW (cms)= 1.38 0.38 1.699 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.92 56.89
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43 0.70

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0105) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
ID1= 1 (5041): 0.30 0.010 3.92 28.04
+ ID2= 2 (5042): 7.40 1.699 3.00 56.89
=====

ID = 3 (0105): 7.70 1.702 3.00 55.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0106) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
| (ha) (cms) (hrs) (mm)
ID1= 1 (0105): 7.70 1.702 3.00 55.76
+ ID2= 2 (0504): 214.44 5.519 3.58 40.40
=====

ID = 3 (0106): 222.14 5.871 3.50 40.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5211) Area (ha)= 1.90 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.078 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 36.240
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.444

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

CALIB
STANDHYD (5212) Area (ha)= 13.80
ID= 1 DT= 5.0 min Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

Surface Area (ha)= IMPERVIOUS 7.18 PERVIOUS (i) 6.62

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 103.56
over (min) 5.00 15.00
Storage Coeff. (min)= 4.51 (ii) 13.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS

PEAK FLOW (cms)= 1.88 1.11 2.816 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 41.61 55.21
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

501.51 83.16 0.0900

----- TRAVEL TIME TABLE -----					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

hydrograph <-----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW: ID= 2 (0114) 237.84 8.55 3.00 41.72 0.67 0.50
OUTFLOW: ID= 1 (0505) 237.84 7.88 3.08 41.72 0.64 0.49

CALIB
NASHYD (5051) Area (ha)= 1.30 Curve Number (CN)= 68.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90

0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.056 (i)
 TIME TO PEAK (hrs)= 3.583
 RUNOFF VOLUME (mm)= 28.047
 TOTAL RAINFALL (mm)= 81.600
 RUNOFF COEFFICIENT = 0.344

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

CALIB
 STANDHYD (5052)
 ID= 1 DT= 5.0 min

Area (ha)= 14.60
 Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
 Surface Area (ha)= 9.64 4.96
 Dep. Storage (mm)= 6.00 8.00
 Average Slope (%)= 1.00 1.00
 Length (m)= 311.98 40.00
 Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90

0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 93.86
 over (min)= 5.00 15.00
 Storage Coeff. (min)= 4.59 (ii) 13.50 (ii)
 Unit Hyd. Tpeak (min)= 5.00 15.00
 Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 2.68 0.73
 TIME TO PEAK (hrs)= 3.00 3.08
 RUNOFF VOLUME (mm)= 75.60 34.92
 TOTAL RAINFALL (mm)= 81.60 81.60
 RUNOFF COEFFICIENT = 0.93 0.43

TOTALS

3.288 (iii)

3.00

56.89

81.60

0.70

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 68.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)
 1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	1.30	0.056	28.05
+ ID2= 2 (0502):	14.60	3.288	56.89
ID = 3 (0107):	15.90	3.307	54.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)
 1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.

(ha) (cms) (hrs) (mm)
 ID1= 1 (0107): 15.90 3.307 3.00 54.53
 + ID2= 2 (0505): 237.84 7.875 3.08 41.72
 ID = 3 (0108): 253.74 10.361 3.00 42.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
 IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 / 0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 / 0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12

1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ----> <-pipe / channel->
 AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
 (ha) (cms) (hrs) (mm) (m) (m/s)
 INFLOW : ID= 2 (0108) 253.74 10.36 3.00 42.52 1.58 1.16
 OUTFLOW: ID= 1 (0506) 253.74 9.66 3.08 42.52 1.55 1.19

CALIB
 NASHYD (5061)
 ID= 1 DT= 5.0 min

Area (ha)= 3.90
 Ia (mm)= 8.00
 U.H. Tp(hrs)= 0.62

Curve Number (CN)= 71.0
 # of Linear Res.(N)= 3.00

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.183 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 30.544
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.374

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

CALIB
STANDHYD (5062)
ID= 1 DT= 5.0 min

Area (ha)= 7.80
Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 5.07 2.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 228.04 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 99.84
over (min) 5.00 15.00
Storage Coeff. (min)= 3.80 (ii) 12.50 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.25 0.08

PEAK FLOW (cms)= 1.43 0.45
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 37.42
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.46 0.71

TOTALS
1.801 (iii)
3.00
57.66
81.60
0.71

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

(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5061):	3.90	0.183	3.58	30.54
+ ID2= 2 (5062):	7.80	1.801	3.00	57.66
=====				
ID = 3 (0109):	11.70	1.866	3.00	48.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0109):	11.70	1.866	3.00	48.62
+ ID2= 2 (0506):	253.74	9.663	3.08	42.52
=====				
ID = 3 (0110):	265.44	10.739	3.08	42.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5101)
ID= 1 DT= 5.0 min

Area (ha)= 0.80
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.42

Curve Number (CN)= 66.0
of Linear Res.(N)= 3.00

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.017 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 26.492
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.325

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

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min

Area (ha)= 0.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 0.45 0.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.46 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

hrs	RAIN mm/hr	hrs	RAIN mm/hr	hrs	RAIN mm/hr	hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.58
over (min) 5.00 15.00
Storage Coeff. (min)= 1.99 (ii) 11.33 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

PEAK FLOW (cms)= 0.11 0.06
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 32.32
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.40 0.58

TOTALS
0.164 (iii)
3.00
47.46
81.60
0.58

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

(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5101):	0.80	0.017	4.58	26.49
+ ID2= 2 (5102):	0.90	0.164	3.00	47.46
=====				
ID = 3 (0115):	1.70	0.166	3.00	37.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 /0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 /0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0115)	1.70	0.17	3.00	37.59	0.03	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.12	3.08	37.59	0.02	0.24

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

CALIB
NASHYD (5111)
ID= 1 DT= 5.0 min | Area (ha)= 1.90 Curve Number (CN)= 67.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.56

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.085 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 27.260
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.334

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

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min | Area (ha)= 1.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 0.55 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 85.63 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 94.85
over (min) 5.00 15.00
Storage Coeff. (min)= 2.11 (ii) 10.99 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

TOTALS

PEAK FLOW (cms)= 0.14 0.09 0.211 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 36.66 50.28
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.45 0.62

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5111): 1.90 0.085 3.50 27.26
+ ID2= 2 (0511): 1.10 0.211 3.00 50.28
=====

ID = 3 (0116): 3.00 0.245 3.00 35.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0116): 3.00 0.245 3.00 35.70
+ ID2= 2 (0511): 1.70 0.120 3.08 37.59
=====

ID = 3 (0117): 4.70 0.360 3.00 36.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning
0.00	80.80	0.0900
9.73	80.46	0.0900
14.10	82.04	0.0900
17.18	82.28	0.0900
41.13	82.12	0.0900 /0.0700
46.88	79.71	0.0700
51.41	80.90	0.0700 /0.0900
94.29	80.56	0.0900
175.64	80.72	0.0900
192.09	80.85	0.0900

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71

0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	RAIN	MAX DEPTH
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0117)	4.70	0.36	3.00	36.39	0.55
OUTFLOW: ID= 1 (0512)	4.70	0.22	3.33	36.38	0.46
					0.32

CALIB			
NASHYD (5121)	Area (ha)=	0.70	Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	1.14	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26

1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 over (min)= 5.00
Storage Coeff. (min)= 2.91 (ii) 11.68 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.28 0.09

TOTALS
PEAK FLOW (cms)= 0.53 0.21 0.703 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 37.11 55.20
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.45 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5121):	0.70	0.021	4.25	30.54
+ ID2= 2 (5122):	3.20	0.703	3.00	55.20
=====				
ID = 3 (0118):	3.90	0.706	3.00	50.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0118):	3.90	0.706	3.00	50.77
+ ID2= 2 (0512):	4.70	0.220	3.33	36.38
=====				
ID = 3 (0119):	8.60	0.870	3.00	42.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.021 (i)
TIME TO PEAK (hrs)= 4.250
RUNOFF VOLUME (mm)= 30.541
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.374

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

CALIB			
STANDHYD (5122)	Area (ha)=	3.20	
ID= 1 DT= 5.0 min	Total Imp(%)=	60.00	Dir. Conn.(%)= 47.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	1.92			
Dep. Storage	(mm)=	6.00			
Average Slope	(%)=	1.00			
Length	(m)=	146.06			
Mannings n	=	0.013			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.44	10.739	3.08	42.79
+ ID2= 2 (0119):	8.60	0.870	3.00	42.91
=====				
ID = 3 (0120):	274.04	11.310	3.08	42.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6011)	Area (ha)=	44.10	Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.83	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.276 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

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

CALIB			
STANDHYD (6012)	Area (ha)= 11.00		
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00	Dir. Conn.(%)= 16.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	3.08	7.92	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	270.80	40.00	
Mannings n	= 0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=	127.30	52.38					
over (min)	5.00	20.00					
Storage Coeff. (min)=	4.22 (ii)	15.47 (ii)					
Unit Hyd. Tpeak (min)=	5.00	20.00					
Unit Hyd. peak (cms)=	0.24	0.07					
			TOTALS				
PEAK FLOW (cms)=	0.60	0.69	1.070 (iii)				
TIME TO PEAK (hrs)=	3.00	3.17	3.00				
RUNOFF VOLUME (mm)=	75.60	26.83	34.64				
TOTAL RAINFALL (mm)=	81.60	81.60	81.60				

1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.141 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

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

CALIB			
STANDHYD (6022)	Area (ha)= 12.90		
ID= 1 DT= 5.0 min	Total Imp(%)= 35.00	Dir. Conn.(%)= 23.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	4.51	8.38	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	293.26	40.00	
Mannings n	= 0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26

RUNOFF COEFFICIENT = 0.93 0.33 0.42

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

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

ADD HYD (0124)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6011):	44.10	1.276	3.83	23.63
+ ID2= 2 (6012):	11.00	1.070	3.00	34.64
=====				
ID = 3 (0124):	55.10	1.597	3.50	25.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6021)	Area (ha)= 43.60	Curve Number (CN)= 62.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.95		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26

1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 53.84
over (min) 5.00 20.00
Storage Coeff. (min)= 4.42 (ii) 15.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.07

PEAK FLOW (cms)= 1.01 0.74
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 75.60 27.16
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.33 0.47

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

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

ADD HYD (0125)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0021):	43.60	1.141	4.00	23.63
+ ID2= 2 (0022):	12.90	1.733	3.00	38.30
=====				
ID = 3 (0125):	56.50	1.733	3.00	26.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	1.597	3.50	25.82
+ ID2= 2 (0125):	56.50	1.733	3.00	26.98
=====				
ID = 3 (0126):	111.60	3.093	3.00	26.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0603)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700 Main Channel
130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

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

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 3.09 3.00 26.41 0.65 0.23
OUTFLOW: ID= 1 (0603) 111.60 2.16 4.58 26.40 0.59 0.22

CALIB
NASHYD (6031) Area (ha)= 19.00 Curve Number (CN)= 72.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.32

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.522 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 31.425
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.385

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

CALIB
STANDHYD (6032) Area (ha)= 10.73
ID= 1 DT= 5.0 min Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

IMPERVIOUS PERVIOUS (i)
(ha)= 3.00 7.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 267.46 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.39
over (min) 5.00 15.00
Storage Coeff. (min)= 4.19 (ii) 13.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS
PEAK FLOW (cms)= 0.55 1.01 1.390 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 35.32 41.36
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43 0.51

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

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

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

ADD HYD (0127)|
| 1 + 2 = 3 |

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6031): 19.00 0.522 4.42 31.42
+ ID2= 2 (6032): 10.73 1.390 3.00 41.36
=====

ID = 3 (0127): 29.73 1.451 3.00 35.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6131) Area (ha)= 1.77 Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.22

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26

1.417 4.90 | 2.917 127.30 | 4.417 6.53 | 5.92 3.26
1.500 4.90 | 3.000 127.30 | 4.500 6.53 | 6.00 3.26

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.146 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 26.463
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.324

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

CALIB
STANDHYD (6222)
ID= 1 DT= 5.0 min

Area (ha)= 2.02
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.58 0.44
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 116.05 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 | 1.583 8.16 | 3.083 17.95 | 4.58 4.90
0.167 3.26 | 1.667 8.16 | 3.167 17.95 | 4.67 4.90
0.250 3.26 | 1.750 8.16 | 3.250 17.95 | 4.75 4.90
0.333 3.26 | 1.833 8.16 | 3.333 17.95 | 4.83 4.90
0.417 3.26 | 1.917 8.16 | 3.417 17.95 | 4.92 4.90
0.500 3.26 | 2.000 8.16 | 3.500 17.95 | 5.00 4.90
0.583 4.90 | 2.083 9.79 | 3.583 8.16 | 5.08 3.26
0.667 4.90 | 2.167 9.79 | 3.667 8.16 | 5.17 3.26
0.750 4.90 | 2.250 9.79 | 3.750 8.16 | 5.25 3.26
0.833 4.90 | 2.333 9.79 | 3.833 8.16 | 5.33 3.26
0.917 4.90 | 2.417 9.79 | 3.917 8.16 | 5.42 3.26
1.000 4.90 | 2.500 9.79 | 4.000 8.16 | 5.50 3.26
1.083 4.90 | 2.583 48.96 | 4.083 6.53 | 5.58 3.26
1.167 4.90 | 2.667 48.96 | 4.167 6.53 | 5.67 3.26
1.250 4.90 | 2.750 88.13 | 4.250 6.53 | 5.75 3.26
1.333 4.90 | 2.833 88.13 | 4.333 6.53 | 5.83 3.26
1.417 4.90 | 2.917 127.30 | 4.417 6.53 | 5.92 3.26
1.500 4.90 | 3.000 127.30 | 4.500 6.53 | 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 59.51
over (min) 5.00 10.00
Storage Coeff. (min)= 2.54 (ii) 7.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.14
TOTALS
PEAK FLOW (cms)= 0.55 0.05 0.608 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 29.57 65.47
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.36 0.80

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6142)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 69.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.04 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 | 1.583 8.16 | 3.083 17.95 | 4.58 4.90
0.167 3.26 | 1.667 8.16 | 3.167 17.95 | 4.67 4.90
0.250 3.26 | 1.750 8.16 | 3.250 17.95 | 4.75 4.90
0.333 3.26 | 1.833 8.16 | 3.333 17.95 | 4.83 4.90
0.417 3.26 | 1.917 8.16 | 3.417 17.95 | 4.92 4.90
0.500 3.26 | 2.000 8.16 | 3.500 17.95 | 5.00 4.90
0.583 4.90 | 2.083 9.79 | 3.583 8.16 | 5.08 3.26
0.667 4.90 | 2.167 9.79 | 3.667 8.16 | 5.17 3.26
0.750 4.90 | 2.250 9.79 | 3.750 8.16 | 5.25 3.26
0.833 4.90 | 2.333 9.79 | 3.833 8.16 | 5.33 3.26

0.917 4.90 | 2.417 9.79 | 3.917 8.16 | 5.42 3.26
1.000 4.90 | 2.500 9.79 | 4.000 8.16 | 5.50 3.26
1.083 4.90 | 2.583 48.96 | 4.083 6.53 | 5.58 3.26
1.167 4.90 | 2.667 48.96 | 4.167 6.53 | 5.67 3.26
1.250 4.90 | 2.750 88.13 | 4.250 6.53 | 5.75 3.26
1.333 4.90 | 2.833 88.13 | 4.333 6.53 | 5.83 3.26
1.417 4.90 | 2.917 127.30 | 4.417 6.53 | 5.92 3.26
1.500 4.90 | 3.000 127.30 | 4.500 6.53 | 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 110.59
over (min) 5.00 15.00
Storage Coeff. (min)= 2.32 (ii) 10.67 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.26 0.09 0.339 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.77 55.18
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6152)
ID= 1 DT= 5.0 min

Area (ha)= 2.14
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.67 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 119.44 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 | 1.583 8.16 | 3.083 17.95 | 4.58 4.90
0.167 3.26 | 1.667 8.16 | 3.167 17.95 | 4.67 4.90

0.250 3.26 | 1.750 8.16 | 3.250 17.95 | 4.75 4.90
0.333 3.26 | 1.833 8.16 | 3.333 17.95 | 4.83 4.90
0.417 3.26 | 1.917 8.16 | 3.417 17.95 | 4.92 4.90
0.500 3.26 | 2.000 8.16 | 3.500 17.95 | 5.00 4.90
0.583 4.90 | 2.083 9.79 | 3.583 8.16 | 5.08 3.26
0.667 4.90 | 2.167 9.79 | 3.667 8.16 | 5.17 3.26
0.750 4.90 | 2.250 9.79 | 3.750 8.16 | 5.25 3.26
0.833 4.90 | 2.333 9.79 | 3.833 8.16 | 5.33 3.26
0.917 4.90 | 2.417 9.79 | 3.917 8.16 | 5.42 3.26
1.000 4.90 | 2.500 9.79 | 4.000 8.16 | 5.50 3.26
1.083 4.90 | 2.583 48.96 | 4.083 6.53 | 5.58 3.26
1.167 4.90 | 2.667 48.96 | 4.167 6.53 | 5.67 3.26
1.250 4.90 | 2.750 88.13 | 4.250 6.53 | 5.75 3.26
1.333 4.90 | 2.833 88.13 | 4.333 6.53 | 5.83 3.26
1.417 4.90 | 2.917 127.30 | 4.417 6.53 | 5.92 3.26
1.500 4.90 | 3.000 127.30 | 4.500 6.53 | 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 59.51
over (min) 5.00 10.00
Storage Coeff. (min)= 2.58 (ii) 7.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.13

PEAK FLOW (cms)= 0.59 0.06 0.644 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 29.57 65.47
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.36 0.80

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6182)
ID= 1 DT= 5.0 min

Area (ha)= 1.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.16 0.33
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 99.67 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)=	127.30	187.52	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.31 (ii)	9.07 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.30	0.12	
			TOTALS
PEAK FLOW (cms)=	0.26	0.12	0.384 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	42.46	59.02
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.52	0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6302)	Area (ha)= 0.86
ID= 1 DT= 5.0 min	Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

- THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6172)	Area (ha)= 2.31
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	1.80		0.51			
Dep. Storage	(mm)=	6.00		8.00			
Average Slope	(%)=	1.00		1.00			
Length	(m)=	124.10		40.00			
Mannings n	=	0.013		0.250			

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)=	127.30	211.23	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.64 (ii)	9.08 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.29	0.12	
			TOTALS
PEAK FLOW (cms)=	0.41	0.22	0.621 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	48.17	61.88

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	0.81	0.05		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	75.72	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)=	127.30	48.76	
over (min)	5.00	5.00	
Storage Coeff. (min)=	1.96 (ii)	4.59 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.31	0.23	
			TOTALS
PEAK FLOW (cms)=	0.29	0.01	0.292 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	24.35	72.52
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.30	0.89

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.59	0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0342)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6142):	1.50	0.339	3.00	55.18
+ ID2= 2 (6152):	2.14	0.644	3.00	65.47
=====				
ID = 3 (0342):	3.64	0.983	3.00	61.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0342):	3.64	0.983	3.00	61.23
+ ID2= 2 (6172):	2.31	0.621	3.00	61.88
=====				
ID = 1 (0342):	5.95	1.605	3.00	61.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	5.95	1.605	3.00	61.48
+ ID2= 2 (6182):	1.49	0.384	3.00	59.02
=====				
ID = 3 (0342):	7.44	1.989	3.00	60.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0342):	7.44	1.989	3.00	60.99
+ ID2= 2 (6222):	2.02	0.608	3.00	65.47
=====				
ID = 1 (0342):	9.46	2.597	3.00	61.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	9.46	2.597	3.00	61.95
+ ID2= 2 (6302):	0.86	0.292	3.00	72.52
=====				
ID = 3 (0342):	10.32	2.889	3.00	62.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6212)			
ID= 1 DT= 5.0 min			
	Area (ha)=	1.15	
	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.75	0.40	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	87.56	40.00	
Mannings n =	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		

0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	40.75	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.14 (ii)	14.59 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.31	0.08	
TOTALS			
PEAK FLOW (cms)=	0.26	0.03	0.287 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	75.60	24.35	57.65
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.30	0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6232)			
ID= 1 DT= 5.0 min			
	Area (ha)=	0.85	
	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.55	0.30	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	75.28	40.00	
Mannings n =	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		

0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	40.75	
over (min)	5.00	15.00	
Storage Coeff. (min)=	1.96 (ii)	14.40 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.31	0.08	
TOTALS			
PEAK FLOW (cms)=	0.20	0.02	0.212 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	75.60	24.35	57.65
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.30	0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0488)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6212):	1.15	0.287	3.00	57.65
+ ID2= 2 (6232):	0.85	0.212	3.00	57.65
=====				
ID = 3 (0488):	2.00	0.499	3.00	57.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6262)			
ID= 1 DT= 5.0 min			
	Area (ha)=	0.96	
	Total Imp(%)=	60.00	Dir. Conn.(%)= 60.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.58	0.38	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	80.00	40.00	
Mannings n =	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)=	127.30	77.39	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.03 (ii)	11.66 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.31	0.09	
TOTALS			
PEAK FLOW (cms)=	0.20	0.05	0.245 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	75.60	38.33	60.68
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.47	0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0346)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	10.32	2.889	3.00	62.83
+ ID2= 2 (0488):	2.00	0.499	3.00	57.65
ID = 3 (0346):	12.32	3.388	3.00	61.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0346):	12.32	3.388	3.00	61.99
+ ID2= 2 (6131):	1.77	0.146	3.00	26.46
ID = 1 (0346):	14.09	3.513	3.00	57.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0346):	14.09	3.513	3.00	57.53
+ ID2= 2 (6262):	0.96	0.245	3.00	60.68
ID = 3 (0346):	15.05	3.758	3.00	57.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0447)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1070	0.3146

0.0150 0.1715 | 0.7100 0.8031

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0346)	15.050	3.758	3.00	57.73
OUTFLOW: ID= 1 (0447)	15.050	0.449	3.58	57.53

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.94
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.5913

CALIB			
STANDHYD (6202)	Area (ha)= 1.26		
ID= 1 DT= 5.0 min	Total Imp(%)= 94.00	Dir. Conn.(%)= 94.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 1.18	0.08
Dep. Storage	(mm)= 6.00	8.00
Average Slope	(%)= 1.00	1.00
Length	(m)= 91.65	40.00
Mannings n	= 0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=	127.30	48.76					

over (min)	5.00	5.00	
Storage Coeff. (min)=	2.20 (ii)	4.83 (ii)	
Unit Hyd. Tpeak (min)=	5.00	5.00	
Unit Hyd. peak (cms)=	0.30	0.22	
			TOTALS
PEAK FLOW (cms)=	0.42	0.01	0.427 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	24.35	72.52
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.30	0.89

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0491)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0580	0.0848
	0.0090	0.0366	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (6202)	1.260	0.427	3.00	72.52
OUTFLOW: ID= 1 (0491)	1.260	0.039	3.58	71.71

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.11
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0662

CALIB			
STANDHYD (6062)	Area (ha)= 1.98		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 1.29	0.69
Dep. Storage	(mm)= 6.00	8.00
Average Slope	(%)= 1.00	1.00
Length	(m)= 114.89	40.00
Mannings n	= 0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=	127.30	40.74					
over (min)	5.00	15.00					
Storage Coeff. (min)=	2.52 (ii)	14.96 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.29	0.08					
		TOTALS					
PEAK FLOW (cms)=	0.45	0.05	0.492 (iii)				
TIME TO PEAK (hrs)=	3.00	3.17	3.00				
RUNOFF VOLUME (mm)=	75.60	24.34	57.66				
TOTAL RAINFALL (mm)=	81.60	81.60	81.60				
RUNOFF COEFFICIENT =	0.93	0.30	0.71				

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6122)	Area (ha)= 2.18		
ID= 1 DT= 5.0 min	Total Imp(%)= 94.00	Dir. Conn.(%)= 94.00	

Surface Area (ha)= 2.05 IMPERVIOUS
Dep. Storage (mm)= 6.00 PERVIOUS (i)
Average Slope (%)= 1.00
Length (m)= 120.55
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 48.76
over (min) 5.00 10.00
Storage Coeff. (min)= 2.59 (ii) 5.22 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.16
PEAK FLOW (cms)= 0.72 0.01 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 0.734 (iii)
RUNOFF VOLUME (mm)= 75.60 24.35 72.52
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.89

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1000) | OVERFLOW IS OFF
IN= 2----> OUT= 1
DT= 5.0 min
OUTFLOW (cms) | STORAGE (ha.m.) | OUTFLOW (cms) | STORAGE (ha.m.)
0.0000 | 0.0000 | 0.1000 | 0.1464
0.0159 | 0.0631 | 0.0000 | 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (6122) 2.180 0.734 3.00 72.52
OUTFLOW: ID= 1 (1000) 2.180 0.067 3.58 72.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.19
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1143

ADD HYD (0493) |
1 + 2 = 3
ID1= 1 (1000): 2.18 0.067 3.58 72.06
+ ID2= 2 (0491): 1.26 0.039 3.58 71.71
=====

ID = 3 (0493): 3.44 0.106 3.58 71.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0493) |
3 + 2 = 1
ID1= 3 (0493): 3.44 0.106 3.58 71.93
+ ID2= 2 (0662): 1.98 0.492 3.00 57.66
=====

ID = 1 (0493): 5.42 0.565 3.00 66.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0319) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->

Distance Elevation Manning
0.00 92.50 0.0700
36.57 92.00 0.0700
90.03 91.00 0.0700
124.58 90.00 0.0700 /0.0350 Main Channel
128.34 89.59 0.0350 Main Channel
129.84 89.59 0.0350 Main Channel
132.39 90.00 0.0350 /0.0700 Main Channel
163.76 91.00 0.0700
187.47 91.00 0.0700
203.83 91.00 0.0700
306.44 92.00 0.0700

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

DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 89.69 .215E+03 0.1 0.46 33.36
0.20 89.79 .579E+03 0.4 0.67 22.75
0.31 89.90 .109E+04 1.0 0.84 18.13
0.41 90.00 .175E+04 1.9 0.99 15.37
0.54 90.13 .324E+04 4.0 1.14 13.36
0.68 90.27 .581E+04 7.3 1.15 13.32
0.81 90.40 .945E+04 11.9 1.15 13.29
0.94 90.53 .142E+05 18.0 1.17 13.10
1.08 90.67 .200E+05 26.0 1.19 12.79
1.21 90.80 .268E+05 36.0 1.23 12.42
1.34 90.93 .348E+05 48.2 1.27 12.03
1.48 91.07 .464E+05 58.3 1.15 13.27
1.61 91.20 .629E+05 78.8 1.15 13.30
1.74 91.33 .819E+05 104.3 1.17 13.08
1.88 91.47 .103E+06 135.3 1.20 12.74
2.01 91.60 .128E+06 172.1 1.24 12.35
2.14 91.73 .154E+06 215.1 1.28 11.94
2.28 91.87 .183E+06 264.7 1.32 11.54
2.41 92.00 .215E+06 321.3 1.37 11.15

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

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0493) 5.42 0.56 3.00 66.72 0.23 0.71
OUTFLOW: ID= 1 (0319) 5.42 0.28 3.08 66.71 0.16 0.56

CALIB |
STANDHYD (6162) | Area (ha)= 0.44
ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 77.39
over (min) 5.00 10.00
Storage Coeff. (min)= 1.61 (ii) 6.36 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

PEAK FLOW (cms)= 0.12 0.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 0.138 (iii)
RUNOFF VOLUME (mm)= 75.60 38.33 67.39
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.47 0.83

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (6102) ID= 1 DT= 5.0 min	Area (ha)= 2.49 Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00
IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)= 1.94	0.55
Dep. Storage (mm)= 6.00	8.00
Average Slope (%)= 1.00	1.00
Length (m)= 128.84	40.00
Mannings n = 0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=	127.30	244.24					
over (min)	5.00	10.00					
Storage Coeff. (min)=	2.70 (ii)	8.78 (ii)					
Unit Hyd. Tpeak (min)=	5.00	10.00					
Unit Hyd. peak (cms)=	0.29	0.12					
			TOTALS				
PEAK FLOW (cms)=	0.44	0.28	0.716 (iii)				
TIME TO PEAK (hrs)=	3.00	3.00	3.00				
RUNOFF VOLUME (mm)=	75.60	56.86	66.23				

TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.70 0.81

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (6242) ID= 1 DT= 5.0 min	Area (ha)= 0.89 Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00
IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)= 0.69	0.20
Dep. Storage (mm)= 6.00	8.00
Average Slope (%)= 1.00	1.00
Length (m)= 77.03	40.00
Mannings n = 0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=	127.30	77.39					

over (min)	5.00	10.00	
Storage Coeff. (min)=	1.98 (ii)	6.74 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.31	0.14	
			TOTALS
PEAK FLOW (cms)=	0.24	0.03	0.278 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	38.33	67.40
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.47	0.83

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0489) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6102):	2.49	0.716	3.00	66.23
+ ID2= 2 (6162):	0.44	0.138	3.00	67.39
=====				
ID = 3 (0489):	2.93	0.854	3.00	66.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0489) 3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0489):	2.93	0.854	3.00	66.40
+ ID2= 2 (6242):	0.89	0.278	3.00	67.40
=====				
ID = 1 (0489):	3.82	1.131	3.00	66.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0490) IN= 2---> OUT= 1 DT= 5.0 min	OVERFLOW IS OFF	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
		0.0000	0.0000	0.1760	0.2330

0.0280 0.0927 | 0.0000 0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0489)	3.820	1.131	3.00	66.63
OUTFLOW: ID= 1 (0490)	3.820	0.117	3.58	66.42
PEAK FLOW REDUCTION [Qout/Qin](%)= 10.37				
TIME SHIFT OF PEAK FLOW (min)= 35.00				
MAXIMUM STORAGE USED (ha.m.)= 0.1775				

CALIB STANDHYD (6192) ID= 1 DT= 5.0 min	Area (ha)= 1.64 Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00
IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)= 1.07	0.57
Dep. Storage (mm)= 6.00	8.00
Average Slope (%)= 1.00	1.00
Length (m)= 104.56	40.00
Mannings n = 0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 86.94

over (min) 5.00 15.00
Storage Coeff. (min)= 2.38 (ii) 11.57 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09
PEAK FLOW (cms)= 0.38 0.09 0.447 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 43.13 64.23
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.53 0.79

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)
1 + 2 = 3
ID1= 1 (0319): 5.42 0.285 3.08 66.71
+ ID2= 2 (0447): 15.05 0.449 3.58 57.53
ID = 3 (0318): 20.47 0.665 3.50 59.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)
3 + 2 = 1
ID1= 3 (0318): 20.47 0.665 3.50 59.96
+ ID2= 2 (0490): 3.82 0.117 3.58 66.42
ID = 1 (0318): 24.29 0.781 3.50 60.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)
1 + 2 = 3
ID1= 1 (0318): 24.29 0.781 3.50 60.98

+ ID2= 2 (6192): 1.64 0.447 3.00 64.23
ID = 3 (0318): 25.93 1.044 3.00 61.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
1 + 2 = 3
ID1= 1 (0127): 29.73 1.451 3.00 35.01
+ ID2= 2 (0318): 25.93 1.044 3.00 61.18
ID = 3 (0128): 55.66 2.495 3.00 47.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
3 + 2 = 1
ID1= 3 (0128): 55.66 2.495 3.00 47.20
+ ID2= 2 (0603): 111.60 2.157 4.58 26.40
ID = 1 (0128): 167.26 3.512 4.42 33.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (1414.9)
Distance Elevation Manning
0.00 86.75 0.0900
3.09 87.40 0.0900
18.33 87.41 0.0900
35.33 86.99 0.0900
73.84 86.75 0.0900
103.33 86.41 0.0900
120.33 86.11 0.0900
129.46 86.13 0.0900
143.37 85.32 0.0900
154.33 85.02 0.0900
161.57 85.09 0.0900
163.05 84.78 0.0900 /0.0700 Main Channel
166.55 83.78 0.0700 Main Channel
168.05 84.78 0.0700 /0.1100 Main Channel

172.02 85.29 0.1100
191.39 86.19 0.1100
270.18 85.78 0.1100
296.33 86.36 0.1100
324.34 86.68 0.1100
368.56 87.05 0.1100

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.17 83.95 .465E+02 0.0 0.03 432.88
0.33 84.11 .186E+03 0.0 0.04 272.70
0.50 84.28 .418E+03 0.0 0.05 208.11
0.67 84.45 .743E+03 0.1 0.06 171.79
0.83 84.61 .116E+04 0.1 0.08 148.04
1.00 84.78 .167E+04 0.2 0.09 131.10
1.20 84.98 .252E+04 0.4 0.10 110.62
1.41 85.19 .469E+04 0.6 0.09 121.59
1.61 85.39 .842E+04 1.1 0.09 126.63
1.81 85.59 .133E+05 1.8 0.09 121.99
2.01 85.79 .192E+05 2.7 0.10 116.68
2.22 86.00 .298E+05 4.0 0.09 125.45
2.42 86.20 .487E+05 5.6 0.08 143.80
2.62 86.40 .736E+05 9.0 0.08 137.02
2.82 86.60 .102E+06 13.1 0.09 130.82
3.03 86.81 .136E+06 18.1 0.09 125.42
3.23 87.01 .178E+06 24.4 0.09 121.07
3.43 87.21 .224E+06 34.2 0.10 108.80
3.63 87.41 .271E+06 44.8 0.11 100.89

hydrograph
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0128) 167.26 3.51 4.42 33.33
OUTFLOW: ID= 1 (0604) 167.26 2.57 4.92 29.08

***** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
NASHYD (6041)
ID= 1 DT= 5.0 min
Area (ha)= 1.70
Ia (mm)= 8.00
U.H. Tp(hrs)= 4.12
Curve Number (CN)= 79.0
of Linear Res.(N)= 3.00

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

TRANSFORMED HYETOGRAPH

TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.023 (i)
TIME TO PEAK (hrs)= 7.500
RUNOFF VOLUME (mm)= 38.381
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.470

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

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min
Area (ha)= 22.30
Total Imp(%)= 65.00
Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.49 7.81
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 385.57 40.00
Mannings n = 0.013 0.250

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

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

0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 120.63
over (min) 5.00 15.00
Storage Coeff. (min)= 5.21 (ii) 13.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08

TOTALS

PEAK FLOW (cms)= 3.96 1.54
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 45.44
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.56

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R. V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (	6041):	1.70	0.023	7.50	38.38
+ ID2= 2 (	6042):	22.30	5.266	3.00	61.42
=====					
ID = 3 (	0129):	24.00	5.267	3.00	59.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (	0129):	24.00	5.267	3.00	59.79
+ ID2= 2 (	0604):	167.26	2.572	4.92	29.08
=====					
ID = 3 (	0130):	191.26	6.132	3.00	32.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)							
IN= 2---> OUT= 1							
				Routing time step (min)'= 5.00			

<----- DATA FOR SECTION (801.4) ----->							
Distance	Elevation	Manning					
0.00	82.95	0.1100					
3.78	82.95	0.1100					
9.24	82.49	0.1100					
50.67	82.10	0.1100					
105.12	82.17	0.1100					
119.34	81.56	0.1100					
150.67	81.66	0.1100					
157.23	82.37	0.1100					
190.03	82.57	0.1100					
223.75	82.27	0.1100					
252.32	82.50	0.1100					
254.65	81.95	0.1100 /0.0700					Main Channel
258.15	80.95	0.0700					Main Channel
259.65	81.95	0.0700 /0.1100					Main Channel
263.15	82.90	0.1100					
278.14	82.80	0.1100					
282.35	81.68	0.1100					
285.02	82.19	0.1100					
336.56	82.53	0.1100					
404.40	82.68	0.1100					

<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.08	81.03	.125E+02	0.0	0.11	104.30		
0.17	81.12	.499E+02	0.0	0.18	65.70		
0.25	81.20	.112E+03	0.0	0.24	50.14		
0.33	81.28	.199E+03	0.1	0.29	41.39		
0.42	81.37	.312E+03	0.1	0.34	35.67		
0.50	81.45	.449E+03	0.2	0.38	31.59		
0.58	81.53	.611E+03	0.4	0.42	28.50		

0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ---->							
<-pipe / channel->							
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (	0130)	191.26	6.13	3.00	32.93	1.04	0.35
OUTFLOW: ID= 1 (	0605)	191.26	2.83	5.00	32.89	0.88	0.28

CALIB					
NASHYD (6111)		Area (ha)=	0.60	Curve Number (CN)=	77.0
ID= 1 DT= 5.0 min		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
		U.H. Tp(hrs)=	1.08		

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

<---- TRANSFORMED HYETOGRAPH ---->							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26

1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 36.237
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.444

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

CALIB							
STANDHYD (6112)							
ID= 1 DT= 5.0 min		Area (ha)=	10.80	Total Imp(%)=	62.00	Dir. Conn.(%)=	50.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	6.70	4.10
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	268.33	40.00
Mannings n	=	0.013	0.250

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

--- TRANSFORMED HYETOGRAPH ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 106.59
over (min) 5.00 15.00
Storage Coeff. (min)= 4.19 (ii) 12.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 1.85 0.72 2.456 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 40.78 58.19
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.50 0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6111): 0.60 0.022 4.08 36.24
+ ID2= 2 (6112): 10.80 2.456 3.00 58.19
=====

ID = 3 (0137): 11.40 2.460 3.00 57.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0137): 11.40 2.460 3.00 57.03
+ ID2= 2 (0605): 191.26 2.828 5.00 32.89
=====

ID = 3 (0139): 202.66 4.375 3.00 34.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6051)
ID= 1 DT= 5.0 min
Area (ha)= 0.40 Curve Number (CN)= 66.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 1.31

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

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.009 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 26.488
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.325

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

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min
Area (ha)= 15.50
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.23 5.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

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

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 89.28
over (min) 5.00 15.00
Storage Coeff. (min)= 4.67 (ii) 13.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
TOTALS
PEAK FLOW (cms)= 2.84 0.73 3.443 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 33.23 56.11
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.41 0.69

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)
1 + 2 = 3
AREA QPEAK TPEAK R.V.

ID1= 1 (6051): 0.40 0.009 4.42 26.49
+ ID2= 2 (6052): 15.50 3.443 3.00 56.11
=====

ID = 3 (0131): 15.90 3.445 3.00 55.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0131): 15.90 3.445 3.00 55.36
+ ID2= 2 (0139): 202.66 4.375 3.00 34.25
=====

ID = 3 (0132): 218.56 7.820 3.00 35.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1
Routing time step (min)'= 5.00

DATA FOR SECTION (350.0) ----->
Distance Elevation Manning
0.00 81.70 0.1100
3.84 81.72 0.1100
5.87 80.72 0.1100
9.38 81.42 0.1100
49.64 81.07 0.1100
80.61 80.72 0.1100
85.61 81.14 0.1100
93.32 80.00 0.1100
95.04 80.45 0.1100
102.72 80.66 0.1100
110.13 78.93 0.1100 /0.0700 Main Channel
118.05 78.63 0.0700 Main Channel
124.40 78.89 0.0700 /0.1100 Main Channel
132.18 79.61 0.1100
139.34 79.23 0.1100
144.67 79.43 0.1100
149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)

```
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70
2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 ( 0132) 218.56 7.82 3.00 35.79 0.74 0.72
OUTFLOW: ID= 1 ( 0530) 218.56 6.10 3.08 35.77 0.66 0.68
```

```
-----
| CALIB |
| STANDHYD ( 5302) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 5.80
Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00
```

```
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.48 2.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250
```

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

```
----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
```

```
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26
```

```
Max.Eff.Inten.(mm/hr)= 127.30 83.58
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.48 (ii) 12.82 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.08
*TOTALS*
PEAK FLOW (cms)= 0.97 0.31 1.223 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 32.32 53.09
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.40 0.65
```

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

```
(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.
```

```
-----
| ADD HYD ( 0134) |
| 1 + 2 = 3 |
|-----|
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0530): 218.56 6.098 3.08 35.77
+ ID2= 2 ( 5302): 5.80 1.223 3.00 53.09
=====
ID = 3 ( 0134): 224.36 6.813 3.00 36.22
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ADD HYD ( 0135) |
| 1 + 2 = 3 |
|-----|
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 ( 0120): 274.04 11.310 3.08 42.80
+ ID2= 2 ( 0134): 224.36 6.813 3.00 36.22
=====
ID = 3 ( 0135): 498.40 18.099 3.00 39.83
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ROUTE CHN( 0507) |
| IN= 2----> OUT= 1 |
|-----|
Routing time step (min)'= 5.00
```

```
<----- DATA FOR SECTION ( 40.0) ----->
Distance Elevation Manning
0.00 79.36 0.0900
7.45 79.32 0.0900
13.77 79.27 0.0900
20.24 79.24 0.0900
27.28 79.26 0.0900
34.16 79.13 0.0900
40.79 79.05 0.0900
47.58 79.05 0.0900
54.30 79.07 0.0900
60.87 79.24 0.0900
71.39 79.48 0.0900
73.53 78.96 0.0900
76.96 78.07 0.0900
82.21 77.08 0.0900 / 0.0700 Main Channel
85.82 76.28 0.0700 Main Channel
89.97 76.89 0.0700 Main Channel
91.35 77.38 0.0700 / 0.0900 Main Channel
95.27 78.68 0.0900
98.44 79.63 0.0900
102.89 79.89 0.0900
```

```
<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.16 76.44 .113E+03 0.0 0.14 88.10
0.32 76.60 .451E+03 0.1 0.23 55.50
0.49 76.76 .101E+04 0.4 0.30 42.35
0.65 76.92 .180E+04 0.9 0.37 34.57
0.81 77.09 .276E+04 1.6 0.44 28.86
0.97 77.25 .388E+04 2.7 0.52 24.37
1.14 77.41 .516E+04 4.0 0.59 21.56
1.30 77.57 .660E+04 5.7 0.66 19.26
1.46 77.74 .822E+04 7.8 0.72 17.67
```

```
1.62 77.90 .100E+05 10.1 0.77 16.48
1.79 78.06 .120E+05 12.8 0.82 15.54
1.95 78.22 .141E+05 15.9 0.87 14.74
2.11 78.39 .163E+05 19.4 0.91 14.06
2.27 78.55 .187E+05 23.2 0.95 13.47
2.44 78.71 .212E+05 27.3 0.99 12.95
2.60 78.87 .239E+05 31.9 1.02 12.50
2.76 79.04 .267E+05 36.8 1.06 12.10
2.92 79.20 .320E+05 39.4 0.94 13.56
3.09 79.36 .409E+05 45.7 0.85 14.94
```

```
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 ( 0135) 498.40 18.10 3.00 39.83 2.05 0.89
OUTFLOW: ID= 1 ( 0507) 498.40 14.62 3.25 39.81 1.88 0.85
```

```
-----
| CALIB |
| NASHYD ( 5071) |
| ID= 1 DT= 5.0 min |
|-----|
Area (ha)= 8.40 Curve Number (CN)= 74.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.72
```

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

```
----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26
```

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.200 (i)
TIME TO PEAK (hrs)= 4.917
RUNOFF VOLUME (mm)= 33.264
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.408

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

CALIB
STANDHYD (5072)
ID= 1 DT= 5.0 min

Area (ha)= 40.50
Total Imp(%)= 45.00 Dir. Conn.(%)= 30.00

IMPERVIOUS PEROVIOUS (i)
Surface Area (ha)= 18.23 22.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 519.62 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)= 127.30 98.85

over (min) 5.00 15.00
Storage Coeff. (min)= 6.23 (ii) 14.96 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08
TOTALS
PEAK FLOW (cms)= 3.97 3.34 6.746 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 39.00 49.98
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.48 0.61

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)
1 + 2 = 3

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (5071): 8.40 0.200 4.92 33.26
+ ID2= 2 (5072): 40.50 6.746 3.00 49.98
=====

ID = 3 (0121): 48.90 6.761 3.00 47.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)
1 + 2 = 3

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0121): 48.90 6.761 3.00 47.11
+ ID2= 2 (0507): 498.40 14.622 3.25 39.81
=====

ID = 3 (0122): 547.30 18.891 3.17 40.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min

AREA (ha)= 253.60
QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 47.57

TIME FLOW | TIME FLOW | TIME FLOW | TIME FLOW | TIME FLOW

hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17

4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16

24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10

29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

STORE HYD(1605)		AREA	(ha)= 218.70
ID= 1 DT= 5.0min		QPEAK	(cms)= 1.37
		TPEAK	(hrs)= 71.92
		VOLUME	(mm)= 85.77

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36

1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29

9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19

13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16

17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16		

26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11

30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

V V I SSSSS U U A L (v 6.2.2018)
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\V02\voin.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\ f08c0fb9-ce2f-4ead-91cd-e769322ec541\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\ f08c0fb9-ce2f-4ead-91cd-e769322ec541\

DATE: 04-10-2024 TIME: 01:34:54

USER:

COMMENTS:

** SIMULATION : 2yrT16.stm **

READ STORM
Ptotal= 40.03 mm
Filename: C:\Users\jannaormond\AppData\Local\Temp\d550afd7-b542-4ce9-bff9-b1d2bb7f65fd\60beaeaa3
Comments: Mount Hope-6 hour SCS Distribution Desig

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	1.59	1.50	3.97	3.00	8.73	4.50	2.38
0.17	1.59	1.67	3.97	3.17	8.73	4.67	3.38
0.33	1.59	1.83	3.97	3.33	8.73	4.83	3.38
0.50	2.38	2.00	4.76	3.50	3.97	5.00	1.59
0.67	2.38	2.17	4.76	3.67	3.97	5.17	1.59
0.83	2.38	2.33	4.76	3.83	3.97	5.33	1.59
1.00	2.38	2.50	23.82	4.00	3.18	5.50	1.59
1.17	2.38	2.67	42.88	4.17	3.18	5.67	1.59
1.33	2.38	2.83	61.93	4.33	3.18	5.83	1.59

CALIB
NASHYD (5011)
ID= 1 DT= 5.0 min
Area (ha)= 80.20
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.85
Curve Number (CN)= 65.0
of Linear Res.(N)= 3.00

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59

0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 0.550 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 6.078
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.152

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

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 37.32
Total Imp(%)= 38.00
Dir. Conn.(%)= 24.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	14.18	23.14
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	498.80	40.00
Mannings n	0.013	0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59

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

```


hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Max.Eff.Inten.(mm/hr)= 61.93 12.91
over (min) 5.00 25.00
Storage Coeff. (min)= 2.54 (ii) 22.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

PEAK FLOW (cms)= 0.09 0.01 0.089 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.34 25.37
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.23 0.63

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	0.71	
STANDHYD (5082)	Total Imp(%)=	73.00	Dir. Conn.(%)= 64.00
ID= 1 DT= 5.0 min			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.52	0.19	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	

Length (m)= 68.80 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.47
over (min) 5.00 25.00
Storage Coeff. (min)= 2.47 (ii) 21.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

PEAK FLOW (cms)= 0.08 0.00 0.080 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 7.86 24.59
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.20 0.61

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	0.53	
STANDHYD (0568)	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
ID= 1 DT= 5.0 min			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.34	0.19	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	59.44	40.00	
Mannings n	0.013	0.250	

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

--- TRANSFORMED HYETOGRAPH ---								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Max.Eff.Inten.(mm/hr)= 61.93 6.03
over (min) 5.00 30.00
Storage Coeff. (min)= 2.26 (ii) 28.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.30 0.04

PEAK FLOW (cms)= 0.06 0.00 0.060 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 5.97 24.18
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.15 0.60

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	0.76	
STANDHYD (0510)	Total Imp(%)=	78.00	Dir. Conn.(%)= 78.00
ID= 1 DT= 5.0 min			
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.59	0.17	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	71.18	40.00	
Mannings n	0.013	0.250	

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.38
over (min) 5.00 25.00
Storage Coeff. (min)= 2.52 (ii) 20.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS

PEAK FLOW (cms)= 0.10 0.00 0.103 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.56 29.07
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.73

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5092)
ID= 1 DT= 5.0 min
Area (ha)= 1.73
Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 9.37 5.08 1.59
0.667 2.38 2.167 4.76 3.667 9.37 5.17 1.59
0.750 2.38 2.250 4.76 3.750 9.37 5.25 1.59
0.833 2.38 2.333 4.76 3.833 9.37 5.33 1.59
0.917 2.38 2.417 4.76 3.917 9.37 5.42 1.59
1.000 2.38 2.500 4.76 4.000 9.37 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 4.82
over (min)= 5.00 35.00
Storage Coeff. (min)= 4.74 (ii) 33.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.22 0.03

PEAK FLOW (cms)= 0.43 0.03 0.438 (iii)
TIME TO PEAK (hrs)= 3.00 3.50 3.00
RUNOFF VOLUME (mm)= 34.03 4.82 17.08
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.12 0.43

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38

1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.38
over (min)= 5.00 25.00
Storage Coeff. (min)= 3.23 (ii) 21.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05

PEAK FLOW (cms)= 0.15 0.02 0.158 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.56 22.92
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.57

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min
Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.80 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 9.37 5.08 1.59
0.667 2.38 2.167 4.76 3.667 9.37 5.17 1.59
0.750 2.38 2.250 4.76 3.750 9.37 5.25 1.59

0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 9.37 5.08 1.59
0.667 2.38 2.167 4.76 3.667 9.37 5.17 1.59
0.750 2.38 2.250 4.76 3.750 9.37 5.25 1.59
0.833 2.38 2.333 4.76 3.833 9.37 5.33 1.59
0.917 2.38 2.417 4.76 3.917 9.37 5.42 1.59
1.000 2.38 2.500 4.76 4.000 9.37 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.64
over (min)= 5.00 25.00
Storage Coeff. (min)= 3.41 (ii) 21.22 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.26 0.05

PEAK FLOW (cms)= 0.23 0.02 0.237 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.72 26.22
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.65

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

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0501): 6.23 0.438 3.00 17.08
+ ID2= 2 (5021): 3.67 0.047 3.42 6.98
===== ID = 3 (0481): 9.90 0.458 3.00 13.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	9.90	0.458	3.00	13.34
+ ID2= 2 (5082):	0.71	0.080	3.00	24.59
=====				
ID = 1 (0481):	10.61	0.538	3.00	14.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	10.61	0.538	3.00	14.09
+ ID2= 2 (5092):	1.73	0.158	3.00	22.92
=====				
ID = 3 (0481):	12.34	0.697	3.00	15.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	12.34	0.697	3.00	15.33
+ ID2= 2 (0510):	0.76	0.103	3.00	29.07
=====				
ID = 1 (0481):	13.10	0.800	3.00	16.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	13.10	0.800	3.00	16.13
+ ID2= 2 (5282):	2.08	0.237	3.00	26.22
=====				
ID = 3 (0481):	15.18	1.037	3.00	17.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	15.18	1.037	3.00	17.51
+ ID2= 2 (0568):	0.53	0.060	3.00	24.18
=====				
ID = 1 (0481):	15.71	1.097	3.00	17.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	1.097	3.00	17.74
+ ID2= 2 (5691):	2.30	0.085	3.00	6.53
=====				
ID = 3 (0481):	18.01	1.181	3.00	16.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	1.181	3.00	16.30
+ ID2= 2 (0575):	0.78	0.089	3.00	25.37
=====				
ID = 1 (0481):	18.79	1.270	3.00	16.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)				
ID= 1 DT= 5.0 min	Area	(ha)= 7.22	Curve Number (CN)= 80.7	
	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.20		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38

0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 0.261 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 11.019
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.275

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

CALIB				
NASHYD (0522)				
ID= 1 DT= 5.0 min	Area	(ha)= 3.31	Curve Number (CN)= 63.1	
	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.16		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59

CALIB				
STANDHYD (0580)				
ID= 1 DT= 5.0 min	Area	(ha)= 1.87		
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.22	0.65	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	111.65	40.00	
Mannings n	=	0.013	0.250	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59

1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 6.03
over (min) 5.00 35.00
Storage Coeff. (min)= 3.31 (ii) 30.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.26 0.04

PEAK FLOW (cms)= 0.21 0.01 0.208 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 34.03 5.97 24.20
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.15 0.60

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0519)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38

0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 5.71
over (min) 5.00 35.00
Storage Coeff. (min)= 3.41 (ii) 30.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.26 0.04

PEAK FLOW (cms)= 0.23 0.01 0.230 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 34.03 5.67 24.10
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.14 0.60

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529)
ID= 1 DT= 5.0 min
Area (ha)= 1.80
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 5.71
over (min) 5.00 35.00
Storage Coeff. (min)= 3.27 (ii) 30.57 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.27 0.04

PEAK FLOW (cms)= 0.24 0.00 0.239 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 34.03 5.67 27.78
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.14 0.69

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0298)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0519): 2.08 0.230 3.00 24.10
+ ID2= 2 (0529): 1.80 0.239 3.00 27.78

ID = 3 (0298): 3.88 0.469 3.00 25.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0298)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0298): 3.88 0.469 3.00 25.81
+ ID2= 2 (0580): 1.87 0.208 3.00 24.20
ID = 1 (0298): 5.75 0.677 3.00 25.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0296)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0298): 5.75 0.677 3.00 25.28
+ ID2= 2 (0522): 3.31 0.066 3.08 5.65
ID = 3 (0296): 9.06 0.740 3.00 18.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0523)
ID= 1 DT= 5.0 min
Area (ha)= 6.61
Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38

0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 38.71
over (min) 5.00 20.00
Storage Coeff. (min)= 4.83 (ii) 17.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS
PEAK FLOW (cms)= 0.54 0.10 0.609 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 34.03 11.75 22.89
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.57

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0291)				
1 + 2 = 3				

ID1= 1 (0296):	9.06	0.740	3.00	18.11
+ ID2= 2 (0523):	6.61	0.609	3.00	22.89
=====				
ID = 3 (0291):	15.67	1.349	3.00	20.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0525)			
ID= 1 DT= 5.0 min			

		Area (ha)=	1.45
		Total Imp(%)=	65.00
		Dir. Conn.(%)=	65.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.94	0.51
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	98.32	40.00
Mannings n	=	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 12.66
over (min) 5.00 25.00
Storage Coeff. (min)= 3.06 (ii) 22.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05

TOTALS
PEAK FLOW (cms)= 0.16 0.01 0.164 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.18 25.32
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.23 0.63

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0304)				
1 + 2 = 3				

ID1= 1 (0291):	15.67	1.349	3.00	20.13
+ ID2= 2 (0525):	1.45	0.164	3.00	25.32
=====				
ID = 3 (0304):	17.12	1.514	3.00	20.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0295)				
1 + 2 = 3				

ID1= 1 (0304):	17.12	1.514	3.00	20.57
+ ID2= 2 (0524):	7.22	0.261	3.00	11.02
=====				
ID = 3 (0295):	24.34	1.738	3.00	17.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0527)			
ID= 1 DT= 5.0 min			

		Area (ha)=	1.68
		Total Imp(%)=	76.00
		Dir. Conn.(%)=	52.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.28	0.40
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	105.83	40.00
Mannings n	=	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38

0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 74.64
over (min) 5.00 15.00
Storage Coeff. (min)= 3.20 (ii) 12.97 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

TOTALS
PEAK FLOW (cms)= 0.15 0.05 0.188 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 18.71 26.67
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.47 0.67

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0301)				
1 + 2 = 3				

ID1= 1 (0295):	24.34	1.738	3.00	17.73
+ ID2= 2 (0527):	1.68	0.188	3.00	26.67
=====				
ID = 3 (0301):	26.02	1.927	3.00	18.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0520)
ID= 1 DT= 5.0 min

Area (ha)= 2.27
Total Imp(%)= 61.00 Dir. Conn.(%)= 61.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.38 0.89
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 123.02 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 13.94
over (min) 5.00 25.00
Storage Coeff. (min)= 3.50 (ii) 22.62 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.26 0.05

TOTALS
PEAK FLOW (cms)= 0.23 0.02 0.242 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.01 24.66
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.62

Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.01
over (min) 5.00 25.00
Storage Coeff. (min)= 2.69 (ii) 21.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.13 0.00 0.127 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.06 28.74
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0310) OVERFLOW IS OFF

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0305)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0301):	26.02	1.927	3.00	18.31
+ ID2= 2 (0520):	2.27	0.242	3.00	24.66
ID = 3 (0305):	28.29	2.169	3.00	18.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0445)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1400	0.8343
0.0195	0.2416	0.2360	1.0014
0.0700	0.5564	0.3420	1.6616

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0305)	28.290	2.169	3.00	18.82
OUTFLOW: ID= 1 (0445)	28.290	0.057	6.08	18.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.62
TIME SHIFT OF PEAK FLOW (min)=185.00
MAXIMUM STORAGE USED (ha.m.)= 0.4739

CALIB
STANDHYD (0526)
ID= 1 DT= 5.0 min

Area (ha)= 0.94
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.73 0.21
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 79.16 40.00

IN= 2----> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0476	0.0432
0.0096	0.0220	0.0579	0.0480
0.0206	0.0306	0.0671	0.0528
0.0297	0.0360	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0526)	0.940	0.127	3.00	28.74
OUTFLOW: ID= 1 (0310)	0.940	0.008	4.08	28.13

PEAK FLOW REDUCTION [Qout/Qin](%)= 6.64
TIME SHIFT OF PEAK FLOW (min)= 65.00
MAXIMUM STORAGE USED (ha.m.)= 0.0193

CALIB
STANDHYD (0574)
ID= 1 DT= 5.0 min

Area (ha)= 1.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.12 0.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 97.98 40.00
Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59

1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	8.93
over (min)	5.00	30.00
Storage Coeff. (min)=	3.06 (ii)	25.89 (ii)
Unit Hyd. Tpeak (min)=	5.00	30.00
Unit Hyd. peak (cms)=	0.27	0.04
PEAK FLOW (cms)=	0.19	0.00
TIME TO PEAK (hrs)=	3.00	3.42
RUNOFF VOLUME (mm)=	34.03	7.71
TOTAL RAINFALL (mm)=	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.19

TOTALS
0.192 (iii)
3.00
28.23
40.03
0.71

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

OVERFLOW IS OFF				
RESERVOIR(0307)				
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0730	0.0642
	0.0150	0.0327	0.0890	0.0712
	0.0310	0.0455	0.1030	0.0784
	0.0450	0.0536	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0574)	1.440	0.192	3.00	28.23
OUTFLOW: ID= 1 (0307)	1.440	0.013	4.08	27.85
PEAK FLOW REDUCTION [Qout/Qin](%)=	6.86			
TIME SHIFT OF PEAK FLOW (min)=	65.00			
MAXIMUM STORAGE USED (ha.m.)=	0.0288			

ADD HYD (0306)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

PEAK FLOW (cms)=	1.54	0.20
TIME TO PEAK (hrs)=	3.00	3.33
RUNOFF VOLUME (mm)=	34.03	9.53
TOTAL RAINFALL (mm)=	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.24

TOTALS
1.636 (iii)
3.00
21.78
40.03
0.54

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0572)	Area (ha)=	11.31		
ID= 1 DT= 5.0 min	Total Imp(%)=	71.00	Dir. Conn.(%)=	50.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	8.03	3.28		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	274.59	40.00		
Mannings n =	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0307):	1.44	0.013	4.08	27.85
+ ID2= 2 (0310):	0.94	0.008	4.08	28.13
ID = 3 (0306):	2.38	0.022	4.08	27.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0571)	Area (ha)=	19.59		
ID= 1 DT= 5.0 min	Total Imp(%)=	68.00	Dir. Conn.(%)=	50.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	13.32	6.27		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	361.39	40.00		
Mannings n =	0.013	0.250		

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	20.90
over (min)	5.00	25.00
Storage Coeff. (min)=	6.69 (ii)	22.94 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.18	0.05

1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	44.53
over (min)	5.00	20.00
Storage Coeff. (min)=	5.67 (ii)	17.68 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.20	0.06
PEAK FLOW (cms)=	0.91	0.23
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	34.03	15.32
TOTAL RAINFALL (mm)=	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.38

TOTALS
1.061 (iii)
3.00
24.67
40.03
0.62

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0314)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0571):	19.59	1.636	3.00	21.78
+ ID2= 2 (0572):	11.31	1.061	3.00	24.67
ID = 3 (0314):	30.90	2.697	3.00	22.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0573)	Area (ha)=	2.66		
ID= 1 DT= 5.0 min	Total Imp(%)=	60.00	Dir. Conn.(%)=	60.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.60	1.06		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	133.17	40.00		
Mannings n =	0.013	0.250		

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

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

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Max.Eff.Inten.(mm/hr)= 61.93 10.21
over (min) 5.00 30.00
Storage Coeff. (min)= 3.67 (ii) 25.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.25 0.04

TOTALS
PEAK FLOW (cms)= 0.27 0.02 0.275 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 8.72 23.90
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22 0.60

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

- (i) CN PROCEDURE SELECTED FOR PREVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0317)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0314):	30.90	2.697	3.00	22.84
+ ID2= 2 (0573):	2.66	0.275	3.00	23.90
=====				

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0102):	64.23	0.149	6.00	20.99
+ ID2= 2 (0481):	18.79	1.270	3.00	16.68
=====				
ID = 3 (0102):	83.02	1.322	3.00	20.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	83.02	1.322	3.00	20.01
+ ID2= 2 (0502):	117.52	0.973	3.67	8.61
=====				
ID = 1 (0102):	200.54	1.812	3.00	13.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	Routing time step (min)'= 5.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 / 0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 / 0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->				
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY
				TRAV.TIME

ID = 3 (0317): 33.56 2.972 3.00 22.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0446)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				
OUTFLOW	STORAGE	OUTFLOW	STORAGE	
(cms)	(ha.m.)	(cms)	(ha.m.)	
0.0000	0.0000	0.2300	1.1312	
0.0230	0.3704	0.2810	1.3850	
0.0900	0.8066	0.4120	2.2335	

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0317)	33.560	2.972	3.00	22.92
OUTFLOW: ID= 1 (0446)	33.560	0.073	6.08	22.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.44
TIME SHIFT OF PEAK FLOW (min)=185.00
MAXIMUM STORAGE USED (ha.m.)= 0.6937

ADD HYD (0102)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0306):	2.38	0.022	4.08	27.96
+ ID2= 2 (0445):	28.29	0.057	6.08	18.68
=====				
ID = 3 (0102):	30.67	0.076	6.00	19.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	30.67	0.076	6.00	19.40
+ ID2= 2 (0446):	33.56	0.073	6.08	22.43
=====				
ID = 1 (0102):	64.23	0.149	6.00	20.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)

(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	<-pipe / channel->	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	200.54	1.81	3.00	13.33	0.76
OUTFLOW: ID= 1 (0503)	200.54	1.44	3.08	13.33	0.68

CALIB				
NASHYD (5031)	Area (ha)=	1.70	Curve Number (CN)=	71.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.82		

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59

0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 7.555
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.189

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

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min
Area (ha)= 12.20
Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 18.26
over (min)= 5.00 25.00
Storage Coeff. (min)= 5.80 (ii) 22.96 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

TOTALS
PEAK FLOW (cms)= 0.92 0.14 0.987 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.04 21.31
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.53

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (5031): 1.70 0.015 3.92 7.56
+ ID2= 2 (5032): 12.20 0.987 3.00 21.31
===== ID = 3 (0103): 13.90 0.990 3.00 19.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0103): 13.90 0.990 3.00 19.63
+ ID2= 2 (0503): 200.54 1.441 3.08 13.33
===== ID = 3 (0104): 214.44 2.345 3.00 13.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2---> OUT= 1
Routing time step (min)= 5.00

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74

2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ----> <-pipe / channel->
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm) MAX DEPTH (m) MAX VEL (m/s)
INFLOW : ID= 2 (0104) 214.44 2.34 3.00 13.74 0.62 0.30
OUTFLOW: ID= 1 (0504) 214.44 1.59 3.50 13.73 0.59 0.28

CALIB
NASHYD (5041)
ID= 1 DT= 5.0 min
Area (ha)= 0.30 Curve Number (CN)= 68.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.89

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.002 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 6.763
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.169

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

CALIB			
STANDHYD (5042)	Area (ha)= 7.40		
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00	Dir. Conn.(%)= 54.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)= 4.88	2.52	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 222.11	40.00	
Mannings n	= 0.013	0.250	

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	18.03	
over (min)	5.00	25.00	
Storage Coeff. (min)=	4.99 (ii)	22.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.21	0.05	
		TOTALS	
PEAK FLOW (cms)=	0.65	0.07	0.688 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	9.51	22.75

TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.24 0.57

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5041):	0.30	0.002	4.00	6.76
+ ID2= 2 (5042):	7.40	0.688	3.00	22.75
=====				
ID = 3 (0105):	7.70	0.689	3.00	22.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	7.70	0.689	3.00	22.12
+ ID2= 2 (0504):	214.44	1.588	3.50	13.73
=====				
ID = 3 (0106):	222.14	1.897	3.00	14.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (5211)	Area (ha)= 1.90	Curve Number (CN)= 77.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.95		

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38

0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.019 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 9.508
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.238

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

CALIB			
STANDHYD (5212)	Area (ha)= 13.80		
ID= 1 DT= 5.0 min	Total Imp(%)= 52.00	Dir. Conn.(%)= 40.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)= 7.18	6.62	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 303.32	40.00	
Mannings n	= 0.013	0.250	

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5211):	1.90	0.019	4.08	9.51
+ ID2= 2 (5212):	13.80	0.988	3.00	20.81
=====				
ID = 3 (0112):	15.70	0.990	3.00	19.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)	

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0106):	222.14	1.897	3.00	14.03
+ ID2= 2 (0112):	15.70	0.990	3.00	19.44
ID = 3 (0114):	237.84	2.887	3.00	14.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)	Routing time step (min)'= 5.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 / 0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

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

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 6.768
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.169

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

CALIB	Area (ha)= 14.60
STANDHYD (5052)	Total Imp(%)= 66.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	9.64	4.96
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	311.98	40.00
Mannings n =	0.013	0.250

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 18.03
over (min) 5.00 25.00
Storage Coeff. (min)= 6.12 (ii) 23.37 (ii)

1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0114)	237.84	2.89	3.00	14.38	0.36	0.33
OUTFLOW: ID= 1 (0505)	237.84	2.43	3.08	14.38	0.32	0.31

CALIB	Area (ha)= 1.30	Curve Number (CN)= 68.0
NASHYD (5051)	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 0.62	

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.080

Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05
TOTALS
PEAK FLOW (cms)= 1.26 0.14 1.321 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.51 22.75
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.24 0.57

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5051):	1.30	0.012	3.67	6.77
+ ID2= 2 (5052):	14.60	1.321	3.00	22.75
ID = 3 (0107):	15.90	1.324	3.00	21.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0107):	15.90	1.324	3.00	21.44
+ ID2= 2 (0505):	237.84	2.429	3.08	14.38
ID = 3 (0108):	253.74	3.462	3.00	14.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)	Routing time step (min)'= 5.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59

1.333 2.38 | 2.833 42.88 | 4.333 3.18 | 5.83 1.59
1.417 2.38 | 2.917 61.93 | 4.417 3.18 | 5.92 1.59
1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.004 (i)
TIME TO PEAK (hrs)= 4.750
RUNOFF VOLUME (mm)= 6.296
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.157

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

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min

Area (ha)= 0.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 0.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.46 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59

1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 15.40
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.65 (ii) 21.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

PEAK FLOW (cms)= 0.05 0.01 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.33 0.059 (iii)
RUNOFF VOLUME (mm)= 34.03 8.53 3.00
TOTAL RAINFALL (mm)= 40.03 40.03 17.44
RUNOFF COEFFICIENT = 0.85 0.21 40.03
0.44

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5101):	0.80	0.004	4.75	6.30
+ ID2= 2 (5102):	0.90	0.059	3.00	17.44
=====				
ID = 3 (0115):	1.70	0.059	3.00	12.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1

Routing time step (min)= 5.00

----- DATA FOR SECTION (553.6) -----

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	

199.00 81.23 0.1100

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

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

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0115)	1.70	0.06	3.00	12.20	0.01	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.04	3.00	12.20	0.01	0.24

CALIB
NASHYD (5111)
ID= 1 DT= 5.0 min

Area (ha)= 1.90
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.56

Curve Number (CN)= 67.0
of Linear Res.(N)= 3.00

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38

0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.019 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 6.529
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.163

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

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min

Area (ha)= 1.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 85.63 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38

0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 18.48
over (min) 5.00 20.00
Storage Coeff. (min)= 2.82 (ii) 19.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.06

TOTALS
PEAK FLOW (cms)= 0.07 0.02 0.076 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 34.03 10.10 18.46
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.46

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5111):	1.90	0.019	3.58	6.53
+ ID2= 2 (5112):	1.10	0.076	3.00	18.46
=====				
ID = 3 (0116):	3.00	0.082	3.00	10.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0117)	4.70	0.12	3.00	11.37	0.37	0.28
OUTFLOW: ID= 1 (0512)	4.70	0.06	3.42	11.37	0.28	0.23

CALIB				
NASHYD (5121)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	0.70	Curve Number (CN)= 71.0
	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	1.14		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 4.333
RUNOFF VOLUME (mm)= 7.553
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.189

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

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0116):	3.00	0.082	3.00	10.90
+ ID2= 2 (0511):	1.70	0.043	3.00	12.20
=====				
ID = 3 (0117):	4.70	0.125	3.00	11.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0512) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->				
Distance	Elevation	Manning		
0.00	80.80	0.0900		
9.73	80.46	0.0900		
14.10	82.04	0.0900		
17.18	82.28	0.0900		
41.13	82.12	0.0900 /0.0700	Main Channel	
46.88	79.71	0.0700	Main Channel	
51.41	80.90	0.0700 /0.0900	Main Channel	
94.29	80.56	0.0900		
175.64	80.72	0.0900		
192.09	80.85	0.0900		

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.13	79.84	.255E+02	0.0	0.14	54.71	
0.26	79.98	.102E+03	0.0	0.23	34.47	
0.40	80.11	.229E+03	0.1	0.30	26.30	
0.53	80.24	.408E+03	0.3	0.36	21.71	
0.66	80.37	.637E+03	0.6	0.42	18.71	
0.79	80.51	.934E+03	0.9	0.46	16.84	
0.93	80.64	.245E+04	1.6	0.31	24.96	
1.06	80.77	.873E+04	4.6	0.25	31.51	
1.19	80.90	.179E+05	11.4	0.30	26.08	
1.32	81.04	.278E+05	22.6	0.38	20.45	
1.46	81.17	.381E+05	37.5	0.46	16.91	
1.60	81.31	.484E+05	55.4	0.54	14.57	
1.74	81.45	.588E+05	76.0	0.61	12.90	
1.87	81.59	.693E+05	99.3	0.67	11.63	
2.01	81.72	.798E+05	125.0	0.73	10.64	
2.15	81.86	.903E+05	153.1	0.80	9.83	
2.29	82.00	.101E+06	183.5	0.85	9.16	
2.42	82.14	.112E+06	214.3	0.90	8.68	
2.56	82.27	.123E+06	244.4	0.93	8.40	

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

CALIB				
STANDHYD (5122)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	3.20	
	Total Imp(%)=	60.00	Dir. Conn.(%)=	47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.92
Dep. Storage	(mm)=	6.00
Average Slope	(%)=	1.00
Length	(m)=	146.06
Mannings n	=	0.013
		0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 19.24
over (min) 5.00 25.00
Storage Coeff. (min)= 3.88 (ii) 20.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05

TOTALS
PEAK FLOW (cms)= 0.25 0.04 0.271 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.29 21.44
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.54

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	0.70	0.005	4.33	7.55
+ ID2= 2 (0122):	3.20	0.271	3.00	21.44
=====				
ID = 3 (0118):	3.90	0.272	3.00	18.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0118):	3.90	0.272	3.00	18.95
+ ID2= 2 (0512):	4.70	0.060	3.42	11.37
=====				
ID = 3 (0119):	8.60	0.317	3.00	14.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.44	3.623	3.08	14.96
+ ID2= 2 (0119):	8.60	0.317	3.00	14.81
=====				
ID = 3 (0120):	274.04	3.857	3.00	14.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6011)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	44.10	Curve Number (CN)= 62.0
	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.83	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.275 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

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

CALIB			
STANDHYD (6012)			
ID= 1 DT= 5.0 min			
Area	(ha)=	11.00	
Total Imp(%)=		28.00	Dir. Conn.(%)= 16.00

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.08		7.92
Dep. Storage	(mm)=	6.00		8.00
Average Slope	(%)=	1.00		1.00
Length	(m)=	270.80		40.00
Mannings n	=	0.013		0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	8.91	
over (min)	5.00	30.00	
Storage Coeff. (min)=	5.63 (ii)	28.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.20	0.04	
TOTALS			
PEAK FLOW (cms)=	0.28	0.11	0.323 (iii)
TIME TO PEAK (hrs)=	3.00	3.42	3.00
RUNOFF VOLUME (mm)=	34.03	6.61	10.99
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.17	0.27

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

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

ADD HYD (0124)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	0.275	3.92	5.47

+ ID2= 2 (6012):	11.00	0.323	3.00	10.99
=====				
ID = 3 (0124):	55.10	0.372	3.75	6.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6021)			
ID= 1 DT= 5.0 min			
Area	(ha)=	43.60	Curve Number (CN)= 62.0
Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)=		0.95	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.247 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

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

CALIB	

| STANDHYD (6022)| Area (ha)= 12.90
|ID= 1 DT= 5.0 min | Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 | 1.583 3.97 | 3.083 8.73 | 4.58 2.38
0.167 1.59 | 1.667 3.97 | 3.167 8.73 | 4.67 2.38
0.250 1.59 | 1.750 3.97 | 3.250 8.73 | 4.75 3.38
0.333 1.59 | 1.833 3.97 | 3.333 8.73 | 4.83 3.38
0.417 1.59 | 1.917 3.97 | 3.417 8.73 | 4.92 3.38
0.500 1.59 | 2.000 3.97 | 3.500 8.73 | 5.00 3.38
0.583 2.38 | 2.083 4.76 | 3.583 3.97 | 5.08 1.59
0.667 2.38 | 2.167 4.76 | 3.667 3.97 | 5.17 1.59
0.750 2.38 | 2.250 4.76 | 3.750 3.97 | 5.25 1.59
0.833 2.38 | 2.333 4.76 | 3.833 3.97 | 5.33 1.59
0.917 2.38 | 2.417 4.76 | 3.917 3.97 | 5.42 1.59
1.000 2.38 | 2.500 4.76 | 4.000 3.97 | 5.50 1.59
1.083 2.38 | 2.583 23.82 | 4.083 3.18 | 5.58 1.59
1.167 2.38 | 2.667 23.82 | 4.167 3.18 | 5.67 1.59
1.250 2.38 | 2.750 42.88 | 4.250 3.18 | 5.75 1.59
1.333 2.38 | 2.833 42.88 | 4.333 3.18 | 5.83 1.59
1.417 2.38 | 2.917 61.93 | 4.417 3.18 | 5.92 1.59
1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 9.23
over (min) 5.00 30.00
Storage Coeff. (min)= 5.90 (ii) 28.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.19 0.04
PEAK FLOW (cms)= 0.48 0.12 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.42 0.519 (iii)
RUNOFF VOLUME (mm)= 34.03 6.72 13.00
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.32

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)

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

ADD HYD (0125)|
1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (6021): 43.60 0.247 4.08 5.47
+ ID2= 2 (6022): 12.90 0.519 3.00 13.00
ID = 3 (0125): 56.50 0.549 3.00 7.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)|
1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0124): 55.10 0.372 3.75 6.57
+ ID2= 2 (0125): 56.50 0.549 3.00 7.19
ID = 3 (0126): 111.60 0.915 3.00 6.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)|
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700 Main Channel
130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400

199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

----- hydrograph -----< -pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 0.92 3.00 6.88 0.52 0.20
OUTFLOW: ID= 1 (0603) 111.60 0.52 4.83 6.88 0.48 0.20

CALIB
NASHYD (6031)| Area (ha)= 19.00 Curve Number (CN)= 72.0
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.32

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 | 1.583 3.97 | 3.083 8.73 | 4.58 2.38
0.167 1.59 | 1.667 3.97 | 3.167 8.73 | 4.67 2.38

Unit Hyd Qpeak (cms)= 0.550
PEAK FLOW (cms)= 0.123 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 7.844
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.196

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

CALIB
STANDHYD (6032)| Area (ha)= 10.73
|ID= 1 DT= 5.0 min | Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.00 7.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 267.46 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 | 1.583 3.97 | 3.083 8.73 | 4.58 2.38
0.167 1.59 | 1.667 3.97 | 3.167 8.73 | 4.67 2.38

0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 15.59
over (min) 5.00 25.00
Storage Coeff. (min)= 5.58 (ii) 23.86 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

TOTALS
PEAK FLOW (cms)= 0.26 0.18 0.343 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.46 13.14
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.24 0.33

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

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

ADD HYD (0127)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6031):	19.00	0.123	4.58	7.84	
+ ID2= 2 (6032):	10.73	0.343	3.00	13.14	
=====					
ID = 3 (0127):	29.73	0.351	3.00	9.76	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6131)			
ID= 1 DT= 5.0 min			
Area (ha)=	1.77	Curve Number (CN)=	66.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.22		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 6.291
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.157

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

CALIB			
STANDHYD (6222)			
ID= 1 DT= 5.0 min			
Area (ha)=	2.02		
Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.58 0.44

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 116.05 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 8.35
over (min) 5.00 30.00
Storage Coeff. (min)= 3.38 (ii) 26.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.26 0.04

TOTALS
PEAK FLOW (cms)= 0.27 0.01 0.268 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 7.24 28.13
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.18 0.70

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6142)			
ID= 1 DT= 5.0 min			
Area (ha)=	1.50		
Total Imp(%)=	69.00	Dir. Conn.(%)=	50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.04 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 21.90
over (min) 5.00 20.00
Storage Coeff. (min)= 3.09 (ii) 19.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.27 0.06

TOTALS
PEAK FLOW (cms)= 0.13 0.02 0.138 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 34.03 9.66 21.84
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.24 0.55

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6152)	Area (ha)= 2.14
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.67	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	119.44	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	8.35
over (min)	5.00	30.00
Storage Coeff. (min)=	3.44 (ii)	26.90 (ii)
Unit Hyd. Tpeak (min)=	5.00	30.00

Unit Hyd. peak (cms)=	0.26	0.04	
PEAK FLOW (cms)=	0.28	0.01	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.42	0.284 (iii)
RUNOFF VOLUME (mm)=	34.03	7.24	3.00
TOTAL RAINFALL (mm)=	40.03	40.03	28.13
RUNOFF COEFFICIENT =	0.85	0.18	40.03
			0.70

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6182)	Area (ha)= 1.49
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.33
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	99.67	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59

1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	49.00
over (min)	5.00	15.00
Storage Coeff. (min)=	3.09 (ii)	14.65 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.27	0.08

PEAK FLOW (cms)=	0.13	0.03	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.17	0.149 (iii)
RUNOFF VOLUME (mm)=	34.03	13.07	23.54
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.33	0.59

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6302)	Area (ha)= 0.86
ID= 1 DT= 5.0 min	Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.81	0.05
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	75.72	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59

0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	11.27
over (min)	5.00	10.00
Storage Coeff. (min)=	2.62 (ii)	6.12 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.29	0.15

PEAK FLOW (cms)=	0.14	0.00	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	0.139 (iii)
RUNOFF VOLUME (mm)=	34.03	5.67	32.33
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.81

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6172)	Area (ha)= 2.31
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.80	0.51
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	124.10	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Max.Eff.Inten.(mm/hr)= 61.93 70.42
over (min) 5.00 15.00
Storage Coeff. (min)= 3.52 (ii) 13.52 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.08

TOTALS
PEAK FLOW (cms)= 0.19 0.06 0.241 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 15.68 24.85
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.39 0.62

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6142):	1.50	0.138	3.00	21.84
+ ID2= 2 (6152):	2.14	0.284	3.00	28.13
=====				
ID = 3 (0342):	3.64	0.423	3.00	25.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0342):	3.64	0.423	3.00	25.54
+ ID2= 2 (6172):	2.31	0.241	3.00	24.85
=====				
ID = 1 (0342):	5.95	0.663	3.00	25.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0342):	5.95	0.663	3.00	25.27
+ ID2= 2 (6182):	1.49	0.149	3.00	23.54
=====				
ID = 3 (0342):	7.44	0.813	3.00	24.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0342):	7.44	0.813	3.00	24.93
+ ID2= 2 (6222):	2.02	0.268	3.00	28.13
=====				
ID = 1 (0342):	9.46	1.081	3.00	25.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0342):	9.46	1.081	3.00	25.61
+ ID2= 2 (6302):	0.86	0.139	3.00	32.33
=====				
ID = 3 (0342):	10.32	1.220	3.00	26.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6212)			
ID= 1 DT= 5.0 min			
	Area (ha)=	1.15	
	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.75	0.40
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	87.56	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 5.71
over (min) 5.00 35.00
Storage Coeff. (min)= 2.86 (ii) 30.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.28 0.04

TOTALS
PEAK FLOW (cms)= 0.13 0.00 0.128 (iii)
TIME TO PEAK (hrs)= 3.00 3.50 3.00
RUNOFF VOLUME (mm)= 34.03 5.67 24.09
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.14 0.60

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (6232)			
ID= 1 DT= 5.0 min			
	Area (ha)=	0.85	
	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.55	0.30
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	75.28	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	'	TIME hrs	RAIN mm/hr	TIME hrs
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 5.71
over (min) 5.00 30.00
Storage Coeff. (min)= 2.61 (ii) 29.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00

Unit Hyd. peak (cms)= 0.29 0.04

PEAK FLOW (cms)= 0.09 0.00

TIME TO PEAK (hrs)= 3.00 3.42

RUNOFF VOLUME (mm)= 34.03 5.67

TOTAL RAINFALL (mm)= 40.03 40.03

RUNOFF COEFFICIENT = 0.85 0.14

TOTALS

0.095 (iii)

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0488)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6212):	1.15	0.128	3.00	24.09
+ ID2= 2 (6232):	0.85	0.095	3.00	24.08
=====				
ID = 3 (0488):	2.00	0.224	3.00	24.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (6262)

ID= 1 DT= 5.0 min

	Area (ha)=	0.96	Dir. Conn.(%)=	60.00
IMPERVIOUS PERVIOUS (i)				
Surface Area (ha)=	0.58	0.38		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	80.00	40.00		
Mannings n	0.013	0.250		

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38

0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.36

over (min)= 5.00 25.00

Storage Coeff. (min)= 2.71 (ii) 21.59 (ii)

Unit Hyd. Tpeak (min)= 5.00 25.00

Unit Hyd. peak (cms)= 0.29 0.05

PEAK FLOW (cms)= 0.10 0.01

TIME TO PEAK (hrs)= 3.00 3.33

RUNOFF VOLUME (mm)= 34.03 10.28

TOTAL RAINFALL (mm)= 40.03 40.03

RUNOFF COEFFICIENT = 0.85 0.26

TOTALS

0.102 (iii)

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0346)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0342):	10.32	1.220	3.00	26.17
+ ID2= 2 (0488):	2.00	0.224	3.00	24.09
=====				
ID = 3 (0346):	12.32	1.444	3.00	25.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)

3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0346):	12.32	1.444	3.00	25.83
+ ID2= 2 (6131):	1.77	0.032	3.08	6.29
=====				
ID = 1 (0346):	14.09	1.469	3.00	23.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0346):	14.09	1.469	3.00	23.38
+ ID2= 2 (6262):	0.96	0.102	3.00	24.52
=====				
ID = 3 (0346):	15.05	1.572	3.00	23.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0447)

IN= 2---> OUT= 1

DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1070	0.3146
0.0150	0.1715	0.7100	0.8031

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0346)	15.050	1.572	3.00	23.45
OUTFLOW: ID= 1 (0447)	15.050	0.083	5.08	23.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.28

TIME SHIFT OF PEAK FLOW (min)=125.00

MAXIMUM STORAGE USED (ha.m.)= 0.2775

CALIB

STANDHYD (6202)

ID= 1 DT= 5.0 min

	Area (ha)=	1.26	Dir. Conn.(%)=	94.00
IMPERVIOUS PERVIOUS (i)				
Surface Area (ha)=	1.18	0.08		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		

Length (m)= 91.65 40.00

Mannings n = 0.013 0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 11.27

over (min)= 5.00 10.00

Storage Coeff. (min)= 2.94 (ii) 6.44 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00

Unit Hyd. peak (cms)= 0.28 0.14

PEAK FLOW (cms)= 0.20 0.00

TIME TO PEAK (hrs)= 3.00 3.08

RUNOFF VOLUME (mm)= 34.03 5.67

TOTAL RAINFALL (mm)= 40.03 40.03

RUNOFF COEFFICIENT = 0.85 0.14

TOTALS

0.203 (iii)

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0491)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0580	0.0848
0.0090	0.0366	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (6202)	1.260	0.203	3.00	32.33
OUTFLOW: ID= 1 (0491)	1.260	0.008	5.08	31.51

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.95
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0327

CALIB
STANDHYD (6062)
ID= 1 DT= 5.0 min

Area (ha)= 1.98
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (ha)
Surface Area	1.29	0.69
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	114.89	40.00
Mannings n	0.013	0.250

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59

0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	11.27	
over (min)	5.00	10.00	
Storage Coeff. (min)=	3.46 (ii)	6.96 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.26	0.14	
PEAK FLOW (cms)=	0.35	0.00	0.349 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	34.03	5.67	32.33
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.81

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1000)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (6122)	2.180	0.349	3.00	32.33
OUTFLOW: ID= 1 (1000)	2.180	0.014	5.08	31.87

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.07
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0564

1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	5.71	
over (min)	5.00	35.00	
Storage Coeff. (min)=	3.36 (ii)	30.67 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.26	0.04	
PEAK FLOW (cms)=	0.22	0.01	0.220 (iii)
TIME TO PEAK (hrs)=	3.00	3.50	3.00
RUNOFF VOLUME (mm)=	34.03	5.67	24.10
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.60

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6122)
ID= 1 DT= 5.0 min

Area (ha)= 2.18
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

	IMPERVIOUS (ha)	PERVIOUS (i) (ha)
Surface Area	2.05	0.13
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	120.55	40.00
Mannings n	0.013	0.250

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59

ADD HYD (0493)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (1000):	2.18	0.014	5.08	31.87
+ ID2= 2 (0491):	1.26	0.008	5.08	31.51
ID = 3 (0493):	3.44	0.022	5.08	31.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0493)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0493):	3.44	0.022	5.08	31.74
+ ID2= 2 (0493):	1.98	0.220	3.00	24.10
ID = 1 (0493):	5.42	0.235	3.00	28.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0319)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

Distance	Elevation	Manning	
0.00	92.50	0.0700	
36.57	92.00	0.0700	
90.03	91.00	0.0700	
124.58	90.00	0.0700 /0.0350	Main Channel
128.34	89.59	0.0350	Main Channel
129.84	89.59	0.0350	Main Channel
132.39	90.00	0.0350 /0.0700	Main Channel
163.76	91.00	0.0700	
187.47	91.00	0.0700	
203.83	91.00	0.0700	
306.44	92.00	0.0700	

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37

0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

<---- hydrograph ----> <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0493) 5.42 0.23 3.00 28.95 0.14 0.53
OUTFLOW: ID= 1 (0319) 5.42 0.10 3.08 28.94 0.10 0.46

CALIB
STANDHYD (6162)
ID= 1 DT= 5.0 min

Area (ha)= 0.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59

0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.36
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.14 (ii) 21.03 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.31 0.05

TOTALS
PEAK FLOW (cms)= 0.06 0.00 0.060 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.28 28.78
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min

Area (ha)= 2.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

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

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

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 91.31
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.60 (ii) 12.61 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

TOTALS
PEAK FLOW (cms)= 0.21 0.08 0.279 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 20.31 27.17
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.51 0.68

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6242)
ID= 1 DT= 5.0 min

Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.36
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.65 (ii) 21.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.12 0.00 0.121 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.28 28.79
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0489)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6102):	2.49	0.279	3.00	27.17
+ ID2= 2 (6162):	0.44	0.060	3.00	28.78
=====				
ID = 3 (0489):	2.93	0.339	3.00	27.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0489)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0489):	2.93	0.339	3.00	27.41
+ ID2= 2 (6242):	0.89	0.121	3.00	28.79
=====				
ID = 1 (0489):	3.82	0.459	3.00	27.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0490)				
IN= 2----> OUT= 1	OVERFLOW IS OFF			
DT= 5.0 min	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1760	0.2330
	0.0280	0.0927	0.0000	0.0000
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0489)	3.820	0.459	3.00	27.73
OUTFLOW: ID= 1 (0490)	3.820	0.025	5.08	27.51

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.35
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0814

CALIB				
STANDHYD (6192)				
ID= 1 DT= 5.0 min	Area (ha)=	1.64		
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.07	0.57	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	

Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 17.42
over (min) 5.00 25.00
Storage Coeff. (min)= 3.18 (ii) 20.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05
TOTALS
PEAK FLOW (cms)= 0.18 0.02 0.188 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 12.21 26.39
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.30 0.66

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0319):	5.42	0.103	3.08	28.94
+ ID2= 2 (0447):	15.05	0.083	5.08	23.26
=====				
ID = 3 (0318):	20.47	0.144	3.50	24.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0318):	20.47	0.144	3.50	24.76
+ ID2= 2 (0490):	3.82	0.025	5.08	27.51
=====				
ID = 1 (0318):	24.29	0.167	3.58	25.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0318):	24.29	0.167	3.58	25.19
+ ID2= 2 (6192):	1.64	0.188	3.00	26.39
=====				
ID = 3 (0318):	25.93	0.313	3.00	25.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0127):	29.73	0.351	3.00	9.76
+ ID2= 2 (0318):	25.93	0.313	3.00	25.27
=====				
ID = 3 (0128):	55.66	0.665	3.00	16.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)

3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	55.66	0.665	3.00	16.98
+ ID2= 2 (0603):	111.60	0.522	4.83	6.88
=====				
ID = 1 (0128):	167.26	0.863	4.50	10.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->					
Distance	Elevation	Manning			
0.00	86.75	0.0900			
3.09	87.40	0.0900			
18.33	87.41	0.0900			
35.33	86.99	0.0900			
73.84	86.75	0.0900			
103.33	86.41	0.0900			
120.33	86.11	0.0900			
129.46	86.13	0.0900			
143.37	85.32	0.0900			
154.33	85.02	0.0900			
161.57	85.09	0.0900			
163.05	84.78	0.0900 / 0.0700	Main Channel		
166.55	83.78	0.0700	Main Channel		
168.05	84.78	0.0700 / 0.1100	Main Channel		
172.02	85.29	0.1100			
191.39	86.19	0.1100			
270.18	85.78	0.1100			
296.33	86.36	0.1100			
324.34	86.68	0.1100			
368.56	87.05	0.1100			

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68

2.22 86.00 .298E+05 4.0 0.09 125.45
2.42 86.20 .487E+05 5.6 0.08 143.80
2.62 86.40 .736E+05 9.0 0.08 137.02
2.82 86.60 .102E+06 13.1 0.09 130.82
3.03 86.81 .136E+06 18.1 0.09 125.42
3.23 87.01 .178E+06 24.4 0.09 121.07
3.43 87.21 .224E+06 34.2 0.10 108.80
3.63 87.41 .271E+06 44.8 0.11 100.89

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0128) 167.26 0.86 4.50 10.24 1.50 0.09
OUTFLOW : ID= 1 (0604) 167.26 0.65 6.17 10.23 1.55 0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
NASHYD (6041)
ID= 1 DT= 5.0 min
Area (ha)= 1.70 Curve Number (CN)= 79.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 4.12

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 2.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 2.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 2.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 2.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.006 (i)
TIME TO PEAK (hrs)= 7.750
RUNOFF VOLUME (mm)= 10.301
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.257

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

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min
Area (ha)= 22.30
Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.49 7.81
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 385.57 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 2.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 2.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 2.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 2.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 31.30
over (min) 5.00 25.00

Storage Coeff. (min)= 6.95 (ii) 20.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.17 0.05
TOTALS
PEAK FLOW (cms)= 1.84 0.33 2.010 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 13.76 24.51
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.34 0.61

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6041): 1.70 0.006 7.75 10.30
+ ID2= 2 (6042): 22.30 2.010 3.00 24.51
ID = 3 (0129): 24.00 2.010 3.00 23.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0129): 24.00 2.010 3.00 23.50
+ ID2= 2 (0604): 167.26 0.654 6.17 10.23
ID = 3 (0130): 191.26 2.237 3.00 11.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

----- DATA FOR SECTION (801.4) ----->
Distance Elevation Manning
0.00 82.95 0.1100
3.78 82.95 0.1100

9.24 82.49 0.1100
50.67 82.10 0.1100
105.12 82.17 0.1100
119.34 81.56 0.1100
150.67 81.66 0.1100
157.23 82.37 0.1100
190.03 82.57 0.1100
223.75 82.27 0.1100
252.32 82.50 0.1100
254.65 81.95 0.1100 /0.0700 Main Channel
258.15 80.95 0.0700 Main Channel
259.65 81.95 0.0700 /0.1100 Main Channel
263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.08 81.03 .125E+02 0.0 0.11 104.30
0.17 81.12 .499E+02 0.0 0.18 65.70
0.25 81.20 .112E+03 0.0 0.24 50.14
0.33 81.28 .199E+03 0.1 0.29 41.39
0.42 81.37 .312E+03 0.1 0.34 35.67
0.50 81.45 .449E+03 0.2 0.38 31.59
0.58 81.53 .611E+03 0.4 0.42 28.50
0.67 81.62 .117E+04 0.5 0.33 36.11
0.75 81.70 .316E+04 1.1 0.24 49.12
0.83 81.78 .560E+04 2.1 0.27 45.15
0.92 81.87 .827E+04 3.4 0.30 40.03
1.00 81.95 .112E+05 5.2 0.33 35.88
1.10 82.05 .151E+05 8.0 0.38 31.68
1.21 82.16 .207E+05 8.8 0.30 39.37
1.31 82.26 .306E+05 14.0 0.33 36.36
1.41 82.36 .433E+05 20.3 0.34 35.59
1.52 82.47 .606E+05 28.4 0.34 35.57
1.62 82.57 .828E+05 41.0 0.36 33.68
1.73 82.68 .109E+06 60.1 0.39 30.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0130) 191.26 2.24 3.00 11.90 0.84 0.27
OUTFLOW: ID= 1 (0605) 191.26 0.91 3.67 11.90 0.72 0.27

CALIB
NASHYD (6111)
ID= 1 DT= 5.0 min

Area (ha)= 0.60
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.08

Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 4.250
RUNOFF VOLUME (mm)= 9.505
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.237

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

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min

Area (ha)= 10.80
Total Imp(%)= 62.00
Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.70 4.10

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 268.33 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 25.81
over (min)= 5.00 25.00
Storage Coeff. (min)= 5.59 (ii) 20.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

TOTALS

PEAK FLOW (cms)= 0.87 0.14 0.943 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.73 22.88
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.57

(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6111):	0.60	0.005	4.25 9.51
+ ID2= 2 (6112):	10.80	0.943	3.00 22.88
=====			
ID = 3 (0137):	11.40	0.944	3.00 22.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):	11.40	0.944	3.00 22.17
+ ID2= 2 (0605):	191.26	0.911	3.67 11.90
=====			
ID = 3 (0139):	202.66	1.617	3.00 12.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6051)
ID= 1 DT= 5.0 min

Area (ha)= 0.40
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.31

Curve Number (CN)= 66.0
of Linear Res.(N)= 3.00

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59

1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.002 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 6.292
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.157

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

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min

Area (ha)= 15.50
Total Imp(%)= 66.00
Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.23 5.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59

1.417 2.38 | 2.917 61.93 | 4.417 3.18 | 5.92 1.59
1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.78
over (min) 5.00 25.00
Storage Coeff. (min)= 6.24 (ii) 23.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

PEAK FLOW (cms)= 1.33 0.13
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 8.90
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22

TOTALS
1.392 (iii)
3.00
22.47
40.03
0.56

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0051):	0.40	0.002	4.58	6.29
+ ID2= 2 (0052):	15.50	1.392	3.00	22.47
ID = 3 (0131):	15.90	1.392	3.00	22.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0131):	15.90	1.392	3.00	22.06
+ ID2= 2 (0139):	202.66	1.617	3.00	12.48
ID = 3 (0132):	218.56	3.009	3.00	13.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

DATA FOR SECTION (350.0)

Distance	Elevation	Manning
0.00	81.70	0.1100
3.84	81.72	0.1100
5.87	80.72	0.1100
9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100
85.61	81.14	0.1100
93.32	80.00	0.1100
95.04	80.45	0.1100
102.72	80.66	0.1100
110.13	78.93	0.1100 /0.0700
118.05	78.63	0.0700
124.40	78.89	0.0700 /0.1100
132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

hydrograph

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

INFLOW : ID= 2 (0132) 218.56 3.01 3.00 13.17 0.48 0.54
OUTFLOW: ID= 1 (0530) 218.56 2.13 3.08 13.17 0.43 0.50

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

	Area (ha)=	5.80
Surface Area (ha)=	3.48	2.32
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00
Mannings n	0.013	0.250

IMPERVIOUS PERVIOUS (i)

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

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73
0.167	1.59	1.667	3.97	3.167	8.73
0.250	1.59	1.750	3.97	3.250	8.73
0.333	1.59	1.833	3.97	3.333	8.73
0.417	1.59	1.917	3.97	3.417	8.73
0.500	1.59	2.000	3.97	3.500	8.73
0.583	2.38	2.083	4.76	3.583	3.97
0.667	2.38	2.167	4.76	3.667	3.97
0.750	2.38	2.250	4.76	3.750	3.97
0.833	2.38	2.333	4.76	3.833	3.97
0.917	2.38	2.417	4.76	3.917	3.97
1.000	2.38	2.500	4.76	4.000	3.97
1.083	2.38	2.583	23.82	4.083	3.18
1.167	2.38	2.667	23.82	4.167	3.18
1.250	2.38	2.750	42.88	4.250	3.18
1.333	2.38	2.833	42.88	4.333	3.18
1.417	2.38	2.917	61.93	4.417	3.18
1.500	2.38	3.000	61.93	4.500	3.18

Max.Eff.Inten.(mm/hr)= 61.93 15.40
over (min) 5.00 25.00
Storage Coeff. (min)= 4.64 (ii) 23.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.22 0.05

PEAK FLOW (cms)= 0.46 0.05

TOTALS
0.485 (iii)

TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.53 20.77
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.21 0.52

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0530):	218.56	2.132	3.08	13.17
+ ID2= 2 (5302):	5.80	0.485	3.00	20.77
ID = 3 (0134):	224.36	2.370	3.08	13.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	274.04	3.857	3.00	14.95
+ ID2= 2 (0134):	224.36	2.370	3.08	13.37
ID = 3 (0135):	498.40	6.173	3.08	14.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

DATA FOR SECTION (40.0)

Distance	Elevation	Manning
0.00	79.36	0.0900
7.45	79.32	0.0900
13.77	79.27	0.0900
20.24	79.24	0.0900
27.28	79.26	0.0900
34.16	79.13	0.0900

40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

	<---- hydrograph ---->				<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.40	6.17	3.08	14.24	1.33	0.68
OUTFLOW : ID= 1 (0507)	498.40	4.42	3.42	14.24	1.17	0.61

CALIB					
NASHYD (5071)	Area	(ha)=	8.40	Curve Number	(CN)= 74.0

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

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	19.80	
over (min)	10.00	25.00	
Storage Coeff. (min)=	8.32 (ii)	24.92 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.13	0.05	
			TOTALS
PEAK FLOW (cms)=	1.69	0.64	1.994 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	10.96	17.88
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.27	0.45

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	

|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 1.72

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

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.049 (i)
TIME TO PEAK (hrs)= 5.167
RUNOFF VOLUME (mm)= 8.460
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.211

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

CALIB					
STANDHYD (5072)	Area	(ha)=	40.50		
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	30.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.23	22.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	519.62	40.00
Mannings n =	0.013	0.250

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5071):	8.40	0.049	5.17	8.46
+ ID2= 2 (5072):	40.50	1.994	3.00	17.88
ID = 3 (0121):	48.90	1.996	3.00	16.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0121):	48.90	1.996	3.00	16.27	
+ ID2= 2 (0507):	498.40	4.422	3.42	14.24	
ID = 3 (0122):	547.30	5.651	3.17	14.42	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)					
ID= 1 DT= 5.0min	AREA	(ha)=	253.60		
	QPEAK	(cms)=	0.78		
	TPEAK	(hrs)=	15.58		
	VOLUME	(mm)=	47.57		

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	' TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17

18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11

22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11

26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10

19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.86	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13

28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

FINISH

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V	V	I	SSSSS	U	U	A	L		(v 6.2.2018)
V	V	I	SS	U	U	A A	L		
V	V	I	SS	U	U	AAAAA	L		

23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53				

0.17	3.68	1.67	9.19	3.17	20.22	4.67	5.51
0.33	3.68	1.83	9.19	3.33	20.22	4.83	5.51
0.50	5.51	2.00	11.03	3.50	9.19	5.00	3.68
0.67	5.51	2.17	11.03	3.67	9.19	5.17	3.68
0.83	5.51	2.33	11.03	3.83	9.19	5.33	3.68
1.00	5.51	2.50	55.14	4.00	7.35	5.50	3.68
1.17	5.51	2.67	99.25	4.17	7.35	5.67	3.68
1.33	5.51	2.83	143.36	4.33	7.35	5.83	3.68

CALIB							
NASHYD (5011)	Area (ha)=	80.20	Curve Number (CN)=	65.0			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.85					

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.123 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 31.899
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.347

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

CALIB							
STANDHYD (5012)	Area (ha)=	37.32					
ID= 1 DT= 5.0 min	Total Imp(%)=	38.00	Dir. Conn.(%)=	24.00			

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	14.18		23.14			
Dep. Storage	(mm)=	6.00		8.00			
Average Slope	(%)=	1.00		1.00			
Length	(m)=	498.80		40.00			
Mannings n	=	0.013		0.250			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	90.00	
over (min)	5.00	15.00	
Storage Coeff. (min)=	5.80 (ii)	14.86 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.20	0.08	
			TOTALS
PEAK FLOW (cms)=	3.33	3.12	5.902 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	37.01	48.74
TOTAL RAINFALL (mm)=	91.90	91.90	91.90

RUNOFF COEFFICIENT = 0.93 0.40 0.53

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (5011):	80.20	3.123	3.83	31.90	
+ ID2= 2 (5012):	37.32	5.902	3.00	48.74	
=====					
ID = 3 (0100):	117.52	6.639	3.00	37.25	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)					
IN= 2---> OUT= 1	Routing time step (min)=	5.00			

<----- DATA FOR SECTION (1537.5) ----->				
Distance	Elevation	Manning		
0.00	89.30	0.1100		
4.20	89.28	0.1100		
9.03	88.80	0.1100		
21.55	88.78	0.1100		
29.06	88.24	0.1100		
39.87	87.83	0.1100		
55.54	87.84	0.1100 / 0.0700	Main Channel	
57.54	86.84	0.0700	Main Channel	
59.04	86.84	0.0700	Main Channel	
61.04	87.84	0.0700 / 0.1100	Main Channel	
74.10	87.86	0.1100		
87.72	88.07	0.1100		
101.34	88.18	0.1100		
113.53	88.23	0.1100		
128.57	88.32	0.1100		
142.19	88.61	0.1100		
155.81	88.53	0.1100		
183.05	88.85	0.1100		
187.19	88.84	0.1100		
211.21	88.88	0.1100		

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.494E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

<---- hydrograph ---->						<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0100)	117.52	6.64	3.00	37.25	1.20	0.57	
OUTFLOW: ID= 1 (0502)	117.52	4.27	3.92	37.24	1.09	0.65	

CALIB							
NASHYD (5691)	Area (ha)=	2.30	Curve Number (CN)=	69.3			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.07					

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68

0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.420 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 32.950
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.359

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

CALIB	
NASHYD (5021)	
ID= 1 DT= 5.0 min	
Area (ha)= 3.67	Curve Number (CN)= 68.8
Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.43	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68

1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.261 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 35.402
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.385

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

CALIB	
STANDHYD (0575)	
ID= 1 DT= 5.0 min	
Area (ha)= 0.78	Total Imp(%)= 65.00
Dir. Conn.(%)= 65.00	

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	0.51	0.27		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	72.11	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68

1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 over (min) 5.00
Storage Coeff. (min)= 1.82 (ii) 10.99 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.32
TOTALS
PEAK FLOW (cms)= 0.20 0.04 0.236 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 43.54 71.07
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.47 0.77

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5082)	
ID= 1 DT= 5.0 min	
Area (ha)= 0.71	Total Imp(%)= 73.00
Dir. Conn.(%)= 64.00	

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	0.52	0.19		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	68.00	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68

0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 over (min) 5.00
Storage Coeff. (min)= 1.77 (ii) 10.54 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.32
TOTALS

PEAK FLOW (cms)= 0.18 0.03 0.208 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 37.04 68.30
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0568)	
ID= 1 DT= 5.0 min	
Area (ha)= 0.53	Total Imp(%)= 65.00
Dir. Conn.(%)= 65.00	

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	0.34	0.19		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	59.44	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51

0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 52.83
over (min) 5.00 15.00
Storage Coeff. (min)= 1.62 (ii) 12.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.08

TOTALS

PEAK FLOW (cms)= 0.14 0.02 0.152 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 31.47 66.83
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.34 0.73

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min
Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 100.05
over (min) 5.00 10.00
Storage Coeff. (min)= 1.80 (ii) 6.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

TOTALS

PEAK FLOW (cms)= 0.24 0.04 0.273 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 50.07 78.01
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.54 0.85

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5092)
Area (ha)= 1.73

ID= 1 DT= 5.0 min | Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 100.05
over (min) 5.00 15.00
Storage Coeff. (min)= 2.31 (ii) 11.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS

PEAK FLOW (cms)= 0.35 0.15 0.475 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 50.07 68.19
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.54 0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)

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

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min
Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.80 40.00
Mannings n = 0.013 0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 44.23
over (min) 5.00 20.00
Storage Coeff. (min)= 3.39 (ii) 15.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.07

TOTALS

PEAK FLOW (cms)= 1.02 0.26 1.202 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00

RUNOFF VOLUME (mm)= 85.90 26.58 51.49
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.29 0.56

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 100.86
over (min) 5.00 15.00
Storage Coeff. (min)= 2.44 (ii) 11.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09
TOTALS
PEAK FLOW (cms)= 0.54 0.13 0.645 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 50.50 73.51
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.55 0.80

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0501): 6.23 1.202 3.00 51.49
+ ID2= 2 (5021): 3.67 0.261 3.33 35.40
===== ID = 3 (0481): 9.90 1.346 3.00 45.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 9.90 1.346 3.00 45.53
+ ID2= 2 (5082): 0.71 0.208 3.00 68.30
===== ID = 1 (0481): 10.61 1.554 3.00 47.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0481): 10.61 1.554 3.00 47.05
+ ID2= 2 (5092): 1.73 0.475 3.00 68.19
===== ID = 3 (0481): 12.34 2.029 3.00 50.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 12.34 2.029 3.00 50.02
+ ID2= 2 (0510): 0.76 0.273 3.00 78.01
===== ID = 1 (0481): 13.10 2.302 3.00 51.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 13.10 2.302 3.00 51.64
+ ID2= 2 (5282): 2.08 0.645 3.00 73.51
===== ID = 3 (0481): 15.18 2.947 3.00 54.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 15.18 2.947 3.00 54.64
+ ID2= 2 (0568): 0.53 0.152 3.00 66.83
===== ID = 1 (0481): 15.71 3.099 3.00 55.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 15.71 3.099 3.00 55.05
+ ID2= 2 (5691): 2.30 0.420 3.00 32.95

===== ID = 3 (0481): 18.01 3.519 3.00 52.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 18.01 3.519 3.00 52.23
+ ID2= 2 (0575): 0.78 0.236 3.00 71.07
===== ID = 1 (0481): 18.79 3.755 3.00 53.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0524)
ID= 1 DT= 5.0 min
Area (ha)= 7.22 Curve Number (CN)= 80.7
Ia (mm)= 8.00 # of Linear Res. (N)= 3.00
U.H. Tp(hrs)= 0.20

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 1.222 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 48.516
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.528

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

CALIB			
NASHYD (0522)	Area (ha)= 3.31	Curve Number (CN)= 63.1	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.16		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.373 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 30.116
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.328

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

CALIB			
STANDHYD (0580)	Area (ha)= 1.87		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.22	0.65
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	111.65	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 52.83
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.36 (ii) 13.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

PEAK FLOW (cms)= 0.48 0.06 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.533 (iii)
RUNOFF VOLUME (mm)= 85.90 31.47 3.00
TOTAL RAINFALL (mm)= 91.90 91.90 66.85
RUNOFF COEFFICIENT = 0.93 0.34 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0519)	Area (ha)= 2.08		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.35	0.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	117.76	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 50.65
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.44 (ii) 13.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.30 0.08

PEAK FLOW (cms)= 0.54 0.07 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.590 (iii)
RUNOFF VOLUME (mm)= 85.90 30.24 3.00
TOTAL RAINFALL (mm)= 91.90 91.90 66.41
RUNOFF COEFFICIENT = 0.93 0.33 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0529)	Area (ha)= 1.80		
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.40	0.40
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	109.54	40.00
Mannings n =	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68

1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	60.35
over (min)	5.00	10.00
Storage Coeff. (min)=	2.34 (ii)	6.87 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.30	0.14
PEAK FLOW (cms)=	0.56	0.05
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	85.90	30.24
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.33

TOTALS
0.607 (iii)

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0298)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0519):	2.08	0.590	3.00	66.41
+ ID2= 2 (0529):	1.80	0.607	3.00	73.65
ID = 3 (0298):	3.88	1.197	3.00	69.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0298)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0298):	3.88	1.197	3.00	69.77
+ ID2= 2 (0508):	1.87	0.533	3.00	66.85
ID = 1 (0298):	5.75	1.730	3.00	68.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0296)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0298):	5.75	1.730	3.00	68.82
+ ID2= 2 (0522):	3.31	0.373	3.00	30.12
ID = 3 (0296):	9.06	2.103	3.00	54.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	6.61
STANDHYD (0523)	Total Imp(%)=	75.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	50.00

Surface Area	(ha)=	4.96	PERVIOUS (i)
Dep. Storage	(mm)=	6.00	1.65
Average Slope	(%)=	1.00	8.00
Length	(m)=	209.92	1.00
Mannings n	=	0.013	40.00

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	185.04
over (min)	5.00	15.00

Storage Coeff. (min)=	3.45 (ii)	10.24 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.26	0.09
PEAK FLOW (cms)=	1.29	0.55
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	47.59
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.52

TOTALS
1.766 (iii)

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0291)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0296):	9.06	2.103	3.00	54.68
+ ID2= 2 (0523):	6.61	1.766	3.00	66.75
ID = 3 (0291):	15.67	3.869	3.00	59.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	1.45
STANDHYD (0525)	Total Imp(%)=	65.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	65.00

Surface Area	(ha)=	0.94	PERVIOUS (i)
Dep. Storage	(mm)=	6.00	0.51
Average Slope	(%)=	1.00	8.00
Length	(m)=	98.32	1.00
Mannings n	=	0.013	40.00

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51

0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	86.21
over (min)	5.00	15.00
Storage Coeff. (min)=	2.19 (ii)	11.41 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.31	0.09

PEAK FLOW (cms)=	0.37	0.07	*TOTALS* 0.436 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	43.01	70.88
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.47	0.77

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0304)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0291):	15.67	3.869	3.00	59.77
+ ID2= 2 (0525):	1.45	0.436	3.00	70.88
ID = 3 (0304):	17.12	4.306	3.00	60.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0295)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0304):	17.12	4.306	3.00	60.71
+ ID2= 2 (0524):	7.22	1.222	3.08	48.52
=====				
ID = 3 (0295):	24.34	5.446	3.00	57.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0527)
ID= 1 DT= 5.0 min

Area (ha)=	1.68
Total Imp(%)=	76.00
Dir. Conn.(%)=	52.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (mm)=
Surface Area	1.28	0.40
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	105.83	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	241.10	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.29 (ii)	8.40 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.30	0.12	
		TOTALS	
PEAK FLOW (cms)=	0.35	0.21	0.552 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	85.90	63.71	75.25
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.69	0.82

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0301)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0295):	24.34	5.446	3.00	57.09
+ ID2= 2 (0527):	1.68	0.552	3.00	75.25
=====				
ID = 3 (0301):	26.02	5.998	3.00	58.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0520)
ID= 1 DT= 5.0 min

Area (ha)=	2.27
Total Imp(%)=	61.00
Dir. Conn.(%)=	61.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (mm)=
Surface Area	1.38	0.89
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	123.02	40.00
Mannings n	0.013	0.250

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

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

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	91.35	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.50 (ii)	11.51 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.29	0.09	
		TOTALS	
PEAK FLOW (cms)=	0.55	0.14	0.664 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	45.60	70.18
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.50	0.76

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0305)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0301):	26.02	5.998	3.00	58.27
+ ID2= 2 (0520):	2.27	0.664	3.00	70.18
=====				
ID = 3 (0305):	28.29	6.662	3.00	59.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0445)
IN= 2--> OUT= 1
ID= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1400	0.8343
0.0195	0.2416	0.2360	1.0014
0.0700	0.5564	0.3420	1.6616

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0305)	28.290	6.662	3.00	59.22
OUTFLOW: ID= 1 (0445)	28.290	0.294	5.17	58.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.42
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.3646

CALIB
STANDHYD (0526)
ID= 1 DT= 5.0 min

Area (ha)=	0.94
Total Imp(%)=	78.00
Dir. Conn.(%)=	78.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (mm)=
Surface Area	0.73	0.21
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	79.16	40.00
Mannings n	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68

0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 91.63
over (min) 5.00 10.00
Storage Coeff. (min)= 1.92 (ii) 6.46 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14

TOTALS
PEAK FLOW (cms)= 0.29 0.04 0.333 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 45.74 77.06
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.50 0.84

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0310)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0476	0.0432
0.0096	0.0220	0.0579	0.0480
0.0206	0.0306	0.0671	0.0528
0.0297	0.0360	0.0000	0.0000

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
0.940	0.333	3.00	77.06
0.940	0.054	3.33	76.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.15
TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.0461

CALIB
STANDHYD (0574)
ID= 1 DT= 5.0 min

Area (ha)= 1.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.12 0.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 97.98 40.00
Mannings n = 0.013 0.250

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 76.27
over (min) 5.00 10.00
Storage Coeff. (min)= 2.19 (ii) 6.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14

TOTALS
PEAK FLOW (cms)= 0.45 0.05 0.497 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 38.06 75.37
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.41 0.82

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0307)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0730	0.0642
0.0150	0.0327	0.0890	0.0712
0.0310	0.0455	0.1030	0.0784
0.0450	0.0536	0.0000	0.0000

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1.440	0.497	3.00	75.37
1.440	0.083	3.25	74.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.71
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0686

Mannings n = 0.013 0.250

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 128.60
over (min) 5.00 15.00
Storage Coeff. (min)= 4.78 (ii) 12.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 3.73 1.32 4.841 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 41.88 63.89
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46 0.70

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0571)
ID= 1 DT= 5.0 min

Area (ha)= 19.59
Total Imp(%)= 68.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 13.32 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00

CALIB

| STANDHYD (0572)| Area (ha)= 11.31
|ID= 1 DT= 5.0 min | Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 9.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 9.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 9.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 9.19 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 189.63
over (min) 5.00 15.00
Storage Coeff. (min)= 4.05 (ii) 10.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.09
TOTALS
PEAK FLOW (cms)= 2.19 1.12 3.167 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 56.97 71.44
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.62 0.78

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 83.26
over (min) 5.00 15.00
Storage Coeff. (min)= 2.63 (ii) 11.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09
TOTALS
PEAK FLOW (cms)= 0.63 0.15 0.754 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 41.53 68.15
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.45 0.74

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0317)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0314): 30.90 8.009 3.00 66.65
+ ID2= 2 (0573): 2.66 0.754 3.00 68.15
=====

ID = 3 (0317): 33.56 8.763 3.00 66.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0446)|
| IN= 2---> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.2300 1.1312
0.0230 0.3704 0.2810 1.3850
0.0900 0.8066 0.4120 2.2335
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0317) 33.560 8.763 3.00 66.77

CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0314)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0571): 19.59 4.841 3.00 63.89
+ ID2= 2 (0572): 11.31 3.167 3.00 71.44
=====

ID = 3 (0314): 30.90 8.009 3.00 66.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (0573)|
|ID= 1 DT= 5.0 min | Area (ha)= 2.66
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.00 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68

OUTFLOW: ID= 1 (0446) 33.560 0.354 5.17 66.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.04
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.8591

| ADD HYD (0102)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0306): 2.38 0.137 3.25 75.57
+ ID2= 2 (0445): 28.29 0.294 5.17 58.99
=====

ID = 3 (0102): 30.67 0.405 3.58 60.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0102)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0102): 30.67 0.405 3.58 60.28
+ ID2= 2 (0446): 33.56 0.354 5.17 66.06
=====

ID = 1 (0102): 64.23 0.735 3.83 63.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0102)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0102): 64.23 0.735 3.83 63.30
+ ID2= 2 (0481): 18.79 3.755 3.00 53.01
=====

ID = 3 (0102): 83.02 4.141 3.00 60.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0102)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0102): 83.02 4.141 3.00 60.97
+ ID2= 2 (0502): 117.52 4.275 3.92 37.24

=====

ID = 1 (0102): 200.54 6.511 3.00 47.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0503)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 /0.0700
127.36	84.21	0.0700
128.86	84.21	0.0700
130.86	85.21	0.0700 /0.0900
131.88	86.36	0.0900
140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48

TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.408

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

| CALIB
| STANDHYD (5032)|
| ID= 1 DT= 5.0 min |

Area (ha)= 12.20
Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22
0.167	3.68	1.667	9.19	3.167	20.22
0.250	3.68	1.750	9.19	3.250	20.22
0.333	3.68	1.833	9.19	3.333	20.22
0.417	3.68	1.917	9.19	3.417	20.22
0.500	3.68	2.000	9.19	3.500	20.22
0.583	5.51	2.083	11.03	3.583	9.19
0.667	5.51	2.167	11.03	3.667	9.19
0.750	5.51	2.250	11.03	3.750	9.19
0.833	5.51	2.333	11.03	3.833	9.19
0.917	5.51	2.417	11.03	3.917	9.19
1.000	5.51	2.500	11.03	4.000	9.19
1.083	5.51	2.583	55.14	4.083	7.35
1.167	5.51	2.667	55.14	4.167	7.35
1.250	5.51	2.750	99.25	4.250	7.35
1.333	5.51	2.833	99.25	4.333	7.35
1.417	5.51	2.917	143.36	4.417	7.35
1.500	5.51	3.000	143.36	4.500	7.35

Max.Eff.Inten.(mm/hr)= 143.36 113.20
over (min) 5.00 15.00
Storage Coeff. (min)= 4.15 (ii) 12.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS
PEAK FLOW (cms)= 2.21 0.94 3.003 (iii)

3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

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

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	200.54	6.51	3.00	47.07	1.34
OUTFLOW: ID= 1 (0503)	200.54	5.80	3.08	47.07	1.27

| CALIB
| NASHYD (5031)|
| ID= 1 DT= 5.0 min |

Area (ha)= 1.70
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.82

Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.080 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 37.512

TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 44.26 63.83
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.48 0.69

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0103)|
| 1 + 2 = 3 |

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

ID1= 1 (5031): 1.70 0.080 3.83 37.51
+ ID2= 2 (5032): 12.20 3.003 3.00 63.83

=====

ID = 3 (0103): 13.90 3.023 3.00 60.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0104)|
| 1 + 2 = 3 |

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

ID1= 1 (0103): 13.90 3.023 3.00 60.61
+ ID2= 2 (0503): 200.54 5.797 3.08 47.07

=====

ID = 3 (0104): 214.44 8.472 3.00 47.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0504)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900

217.10	82.90	0.0900	
229.61	83.66	0.0900 /0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

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

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0104)	214.44	8.47	3.00	47.94	0.82	0.34
OUTFLOW: ID= 1 (0504)	214.44	6.49	3.50	47.94	0.78	0.33

|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
----- U.H. Tp(hrs)= 0.89

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.012 (i)

TIME TO PEAK (hrs)= 3.917

RUNOFF VOLUME (mm)= 34.596

TOTAL RAINFALL (mm)= 91.900

RUNOFF COEFFICIENT = 0.376

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

CALIB	
STANDHYD (5042)	Area (ha)= 7.40
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	4.88	2.52
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	222.11	40.00
Mannings n =	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	113.36
over (min)	5.00	15.00
Storage Coeff. (min)=	3.57 (ii)	11.83 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.26	0.09

TOTALS

PEAK FLOW (cms)=	1.56	0.48	1.963 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	
RUNOFF VOLUME (mm)=	85.90	42.41	65.89
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.46	0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):	0.30	0.012	3.92	34.60
+ ID2= 2 (0042):	7.40	1.963	3.00	65.89
ID = 3 (0105):	7.70	1.966	3.00	64.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0105):	7.70	1.966	3.00	64.67
+ ID2= 2 (0504):	214.44	6.492	3.50	47.94
ID = 3 (0106):	222.14	7.092	3.17	48.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (5211)	Area (ha)= 1.90 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.95

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

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68

1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.095 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 44.057
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.479

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

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min

Area (ha)= 13.80
Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.18 6.62
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 123.41
over (min) 5.00 15.00
Storage Coeff. (min)= 4.30 (ii) 12.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

PEAK FLOW (cms)= 2.12 1.38
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 50.00
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.54

TOTALS
3.297 (iii)
3.00
64.36
91.90
0.70

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (5211):	1.90	0.095	3.92	44.06
+ ID2= 2 (5212):	13.80	3.297	3.00	64.36
ID = 3 (0112):	15.70	3.317	3.00	61.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0106):	222.14	7.092	3.17	48.52
+ ID2= 2 (0112):	15.70	3.317	3.00	61.90
ID = 3 (0114):	237.84	10.149	3.00	49.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2--> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100
69.13	79.02	0.1100
92.42	79.04	0.1100
98.70	80.89	0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100
266.11	81.68	0.1100
306.94	81.73	0.1100
331.74	81.55	0.1100 / 0.0700
336.74	80.15	0.0700
346.34	81.64	0.0700 / 0.0900
394.77	81.68	0.0900
431.64	81.44	0.0900
477.44	82.08	0.0900
481.25	82.81	0.0900
501.51	83.16	0.0900

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

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

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

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.84	10.15	3.00	49.41	0.74
OUTFLOW: ID= 1 (0505)	237.84	9.44	3.08	49.40	0.52

CALIB
NASHYD (5051)
ID= 1 DT= 5.0 min

Area (ha)= 1.30
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.62

Curve Number (CN)= 68.0
of Linear Res.(N)= 3.00

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.069 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 34.601
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.377

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

CALIB
STANDHYD (5052)
ID= 1 DT= 5.0 min

Area (ha)= 14.60
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

Surface Area (ha)= IMPERVIOUS 9.64 PERVIOUS (i) 4.96
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 311.98 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 113.36
over (min) 5.00 15.00
Storage Coeff. (min)= 4.38 (ii) 12.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08 *TOTALS*
PEAK FLOW (cms)= 3.03 0.92 3.803 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 42.41 65.89
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0107) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (5051): 1.30 0.069 3.58 34.60
+ ID2= 2 (5052): 14.60 3.803 3.00 65.89
===== ID = 3 (0107): 15.90 3.828 3.00 63.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0108) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0107): 15.90 3.828 3.00 63.34
+ ID2= 2 (0505): 237.84 9.437 3.08 49.40
===== ID = 3 (0108): 253.74 12.292 3.00 50.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0506) |
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900
45.97 80.05 0.0900
65.23 79.93 0.0900
84.49 80.35 0.0900
113.49 80.02 0.0900
136.48 80.07 0.0900
188.81 79.81 0.0900
197.86 79.25 0.0900 /0.0700 Main Channel
200.70 78.22 0.0700 Main Channel
203.29 79.35 0.0700 /0.0900 Main Channel
204.01 79.67 0.0900
236.47 80.40 0.0900
277.80 80.48 0.0900
305.35 80.37 0.0900

346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 78.34 .979E+01 0.0 0.23 21.53
0.23 78.45 .392E+02 0.0 0.37 13.56
0.34 78.56 .881E+02 0.1 0.48 10.35
0.46 78.68 .157E+03 0.3 0.58 8.54
0.57 78.79 .245E+03 0.6 0.67 7.36
0.68 78.91 .352E+03 0.9 0.76 6.52
0.80 79.02 .480E+03 1.4 0.84 5.88
0.91 79.13 .627E+03 1.9 0.92 5.38
1.03 79.25 .793E+03 2.7 0.99 4.98
1.15 79.37 .103E+04 3.8 1.09 4.55
1.28 79.50 .135E+04 5.2 1.16 4.28
1.40 79.62 .175E+04 7.1 1.20 4.12
1.52 79.75 .228E+04 9.3 1.21 4.08
1.65 79.87 .318E+04 11.7 1.10 4.52
1.77 80.00 .524E+04 15.8 0.90 5.52
1.90 80.12 .973E+04 24.3 0.74 6.69
2.02 80.24 .158E+05 39.7 0.75 6.62
2.15 80.37 .230E+05 59.2 0.77 6.46
2.27 80.49 .349E+05 90.3 0.77 6.44

<----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.74 12.29 3.00 50.28 1.67 1.06
OUTFLOW: ID= 1 (0506) 253.74 11.16 3.17 50.28 1.62 1.12

| CALIB |
| NASHYD (5061) | Area (ha)= 3.90 Curve Number (CN)= 71.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.62

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51

0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.227 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 37.512
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.408

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

| CALIB |
| STANDHYD (5062) | Area (ha)= 7.80
| ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.07 2.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 228.04 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51

0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 119.99
over (min) 5.00 15.00
Storage Coeff. (min)= 3.63 (ii) 11.71 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
PEAK FLOW (cms)= 1.61 0.56 2.083 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 45.26 66.80
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.73

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5061):	3.90	0.227	3.58	37.51
+ ID2= 2 (5062):	7.80	2.083	3.00	66.80
ID = 3 (0109):	11.70	2.166	3.00	57.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0109):	11.70	2.166	3.00	57.04
+ ID2= 2 (0506):	253.74	11.165	3.17	50.28
ID = 3 (0110):	265.44	12.380	3.08	50.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.80	Curve Number (CN)=	66.0
NASHYD (5101)	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	1.42			

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 32.775
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.357

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

CALIB	Area	(ha)=	0.90
STANDHYD (5102)	Total Imp(%)=	50.00	Dir. Conn.(%)= 35.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	0.45
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	77.46	40.00
Mannings n =	0.013	0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 101.50
over (min) 5.00 15.00
Storage Coeff. (min)= 1.90 (ii) 10.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

TOTALS
PEAK FLOW (cms)= 0.13 0.08 0.192 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 39.44 55.70
TOTAL RAINFALL (mm)= 91.90 91.90 91.90

RUNOFF COEFFICIENT = 0.93 0.43 0.61

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5101):	0.80	0.022	4.58	32.78
+ ID2= 2 (5102):	0.90	0.192	3.00	55.70
ID = 3 (0115):	1.70	0.195	3.00	44.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)	Routing time step (min)=	5.00
IN= 2---- OUT= 1		

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 /0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 /0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71

0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0115)	1.70	0.19	3.00	44.91	0.04	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.14	3.08	44.91	0.03	0.24

CALIB					
NASHYD (5111)	Area (ha)=	1.90	Curve Number (CN)=	67.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.56			

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68

1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.106 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 33.678
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.366

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

CALIB					
STANDHYD (5112)	Area (ha)=	1.10	Dir. Conn.(%)=	35.00	
ID= 1 DT= 5.0 min	Total Imp(%)=	50.00			
	IMPERVIOUS		PERVIOUS (i)		
Surface Area	(ha)=	0.55	0.55		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	85.63	40.00		
Mannings n	=	0.013	0.250		

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	114.19
over (min)	5.00	15.00
Storage Coeff. (min)	2.02 (ii)	10.26 (ii)
Unit Hyd. Tpeak (min)	5.00	15.00
Unit Hyd. peak (cms)	0.31	0.09
		TOTALS
PEAK FLOW (cms)=	0.15	0.11
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	44.41
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.48
		0.64

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (5111):	1.90	0.106	3.50	33.68	
+ ID2= 2 (5112):	1.10	0.248	3.00	58.93	
ID = 3 (0116):	3.00	0.291	3.00	42.94	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (0116):	3.00	0.291	3.00	42.94	
+ ID2= 2 (0511):	1.70	0.141	3.08	44.91	
ID = 3 (0117):	4.70	0.426	3.00	43.65	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)					
IN= 2----> OUT= 1	Routing time step (min)=	5.00			

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning	
0.00	80.80	0.0900	
9.73	80.46	0.0900	
14.10	82.04	0.0900	
17.18	82.28	0.0900	
41.13	82.12	0.0900 /0.0700	Main Channel
46.88	79.71	0.0700	Main Channel
51.41	80.90	0.0700 /0.0900	Main Channel
94.29	80.56	0.0900	
175.64	80.72	0.0900	
192.09	80.85	0.0900	

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

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0117)	4.70	0.43	3.00	43.65	0.59	0.38
OUTFLOW: ID= 1 (0512)	4.70	0.27	3.25	43.64	0.50	0.34

CALIB					
NASHYD (5121)	Area (ha)=	0.70	Curve Number (CN)=	71.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	1.14			

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 37.509
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.408

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

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min

Area (ha)= 3.20
Total Imp(%)= 60.00 Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.92	1.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	146.06	40.00
Mannings n	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 117.57
over (min) 5.00 15.00
Storage Coeff. (min)= 2.78 (ii) 10.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

PEAK FLOW (cms)= 0.59 0.26 0.816 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 44.91 64.17
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.70

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)
1 + 2 = 3

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

ID1= 1 (5121): 0.70 0.026 4.17 37.51
+ ID2= 2 (5122): 3.20 0.816 3.00 64.17
=====

ID = 3 (0118): 3.90 0.821 3.00 59.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)
1 + 2 = 3

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

ID1= 1 (0118): 3.90 0.821 3.00 59.39
+ ID2= 2 (0512): 4.70 0.270 3.25 43.64
=====

ID = 3 (0119): 8.60 1.020 3.00 50.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)
1 + 2 = 3

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

ID1= 1 (0110): 265.44 12.380 3.08 50.57
+ ID2= 2 (0119): 8.60 1.020 3.00 50.78
=====

ID = 3 (0120): 274.04 13.087 3.00 50.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6011)
ID= 1 DT= 5.0 min

Area (ha)= 44.10 Curve Number (CN)= 62.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.83

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68

0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.596 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 29.382
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

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

CALIB
STANDHYD (6012)
ID= 1 DT= 5.0 min

Area (ha)= 11.00
Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.80	40.00
Mannings n	0.013	0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68

0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 76.68
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.02 (ii) 13.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 0.68 0.94
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 33.10
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.36

TOTALS
1.451 (iii)
3.00
41.55
91.90
0.45

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

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

ADD HYD (0124)				
1 + 2 = 3				
ID1= 1 (6011):	44.10	1.596	3.83	29.38
+ ID2= 2 (6012):	11.00	1.451	3.00	41.55
=====				
ID = 3 (0124):	55.10	1.931	3.50	31.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)				
ID= 1 DT= 5.0 min				
Area (ha)=	43.60	Curve Number (CN)=	62.0	
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
U.H. Tp(hrs)=	0.95			

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.426 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 29.382
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

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

CALIB			
STANDHYD (6022)			
ID= 1 DT= 5.0 min			
Area (ha)=	12.90	Dir. Conn.(%)=	23.00
Total Imp(%)=	35.00		

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.51	8.38	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	293.26	40.00	
Mannings n	=	0.013	0.250	

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 78.70
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.22 (ii) 13.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 1.14 1.02
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 33.48
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.36

TOTALS
1.979 (iii)
3.00
45.53
91.90
0.50

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

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

ADD HYD (0125)				
1 + 2 = 3				
Area (ha)=	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	

ID1= 1 (6021):	43.60	1.426	4.00	29.38
+ ID2= 2 (6022):	12.90	1.979	3.00	45.53
=====				
ID = 3 (0125):	56.50	2.259	3.00	33.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3				
ID1= 1 (0124):	55.10	1.931	3.50	31.81
+ ID2= 2 (0125):	56.50	2.259	3.00	33.07
=====				
ID = 3 (0126):	111.60	4.090	3.00	32.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)		Routing time step (min)'= 5.00	
IN= 2----> OUT= 1			

<----- DATA FOR SECTION (2135.9) ----->				
Distance	Elevation	Manning		
0.00	92.58	0.1400		
8.54	92.59	0.1400		
22.11	92.47	0.1400		
48.74	91.83	0.1400		
67.59	91.58	0.1400		
86.45	91.21	0.1400		
103.50	90.80	0.1400		
118.09	90.23	0.1400		
127.84	90.09	0.1400 / 0.0700	Main Channel	
129.84	89.59	0.0700	Main Channel	
130.34	90.09	0.0700 / 0.1400	Main Channel	
140.57	90.14	0.1400		
161.87	90.11	0.1400		
177.03	90.04	0.1400		
188.67	89.87	0.1400		
199.59	90.31	0.1400		
212.02	90.96	0.1400		
225.58	91.35	0.1400		
252.71	91.66	0.1400		
274.11	91.86	0.1400		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29

0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

		<--- hydrograph --->		<-pipe / channel-->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0126)	111.60	4.09	3.00	32.45	0.69
OUTFLOW: ID= 1 (0603)	111.60	2.68	4.50	32.44	0.62
					MAX VEL
					(m/s)

CALIB	
NASHYD (6031)	Area (ha)= 19.00
ID= 1 DT= 5.0 min	Ia (mm)= 8.00
	U.H. Tp(hrs)= 1.32
	Curve Number (CN)= 72.0
	# of Linear Res.(N)= 3.00

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68

1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	100.72
over (min)	5.00	15.00
Storage Coeff. (min)=	3.99 (ii)	12.66 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.08
TOTALS		
PEAK FLOW (cms)=	0.62	1.27
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	42.93
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.54

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

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

ADD HYD (0127)	
1 + 2 = 3	
ID1= 1 (6031):	AREA (ha)= 19.00
+ ID2= 2 (6032):	QPEAK (cms)= 0.642
	TPEAK (hrs)= 4.42
	R.V. (mm)= 38.53
ID = 3 (0127):	AREA (ha)= 29.73
	QPEAK (cms)= 1.770
	TPEAK (hrs)= 3.00
	R.V. (mm)= 42.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (6131)	Area (ha)= 1.77
ID= 1 DT= 5.0 min	Ia (mm)= 8.00
	U.H. Tp(hrs)= 0.22
	Curve Number (CN)= 66.0
	# of Linear Res.(N)= 3.00

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

0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)=	0.642 (i)
TIME TO PEAK (hrs)=	4.417
RUNOFF VOLUME (mm)=	38.533
TOTAL RAINFALL (mm)=	91.900
RUNOFF COEFFICIENT =	0.419

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

CALIB	
STANDHYD (6032)	Area (ha)= 10.73
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00
	Dir. Conn.(%)= 15.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.00	7.73		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	267.46	40.00		
Mannings n	=	0.013	0.250		

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)=	0.182 (i)
TIME TO PEAK (hrs)=	3.083
RUNOFF VOLUME (mm)=	32.738
TOTAL RAINFALL (mm)=	91.900
RUNOFF COEFFICIENT =	0.356

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

CALIB	
STANDHYD (6222)	Area (ha)= 2.02
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00
	Dir. Conn.(%)= 78.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	1.58	0.44		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	116.05	40.00		
Mannings n	=	0.013	0.250		

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

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 72.85
over (min) 5.00 10.00
Storage Coeff. (min)= 2.42 (ii) 6.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS

PEAK FLOW (cms)= 0.62 0.07 0.692 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 36.38 75.00
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.82

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (6142)	1.50	1.04	0.47
ID= 1 DT= 5.0 min	69.00	6.00	8.00
Surface Area (ha)=			
Dep. Storage (mm)=			

Average Slope (%)= 1.00 1.00
Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 133.49
over (min) 5.00 10.00
Storage Coeff. (min)= 2.21 (ii) 9.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.11

TOTALS

PEAK FLOW (cms)= 0.30 0.12 0.414 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 42.17 64.03
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46 0.70

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (6152)	2.14	1.67	0.47
ID= 1 DT= 5.0 min	78.00	6.00	8.00
Surface Area (ha)=			
Dep. Storage (mm)=			
Average Slope (%)=			
Length (m)=			
Mannings n =			

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 72.85
over (min) 5.00 10.00
Storage Coeff. (min)= 2.46 (ii) 7.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS

PEAK FLOW (cms)= 0.66 0.07 0.733 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 36.38 75.00
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.82

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (6182)	1.49	1.16	0.33
ID= 1 DT= 5.0 min	78.00	6.00	8.00
Surface Area (ha)=			
Dep. Storage (mm)=			
Average Slope (%)=			
Length (m)=			
Mannings n =			

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

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 222.82
over (min) 5.00 10.00
Storage Coeff. (min)= 2.21 (ii) 8.51 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

TOTALS
PEAK FLOW (cms)= 0.30 0.15 0.445 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 50.76 68.32
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.55 0.74

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302)
ID= 1 DT= 5.0 min
Area (ha)= 0.86
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.81 0.05
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.72 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68

1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 60.35
over (min) 5.00 5.00
Storage Coeff. (min)= 1.87 (ii) 4.37 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.32 0.23

TOTALS
PEAK FLOW (cms)= 0.32 0.01 0.330 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 82.56
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.90

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6172)
ID= 1 DT= 5.0 min
Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68

0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 248.28
over (min) 5.00 10.00
Storage Coeff. (min)= 2.52 (ii) 8.56 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.12

TOTALS
PEAK FLOW (cms)= 0.46 0.26 0.718 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 57.07 91.48
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.62 0.78

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0342)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6142): 1.50 0.414 3.00 64.03
+ ID2= 2 (6152): 2.14 0.733 3.00 75.00
ID = 3 (0342): 3.64 1.148 3.00 70.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0342): 3.64 1.148 3.00 70.48

+ ID2= 2 (6172): 2.31 0.718 3.00 71.48
ID = 1 (0342): 5.95 1.866 3.00 70.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0342): 5.95 1.866 3.00 70.87
+ ID2= 2 (6182): 1.49 0.445 3.00 68.32
ID = 3 (0342): 7.44 2.311 3.00 70.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0342): 7.44 2.311 3.00 70.36
+ ID2= 2 (6222): 2.02 0.692 3.00 75.00
ID = 1 (0342): 9.46 3.003 3.00 71.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0342): 9.46 3.003 3.00 71.35
+ ID2= 2 (6302): 0.86 0.330 3.00 82.56
ID = 3 (0342): 10.32 3.333 3.00 72.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6212)
ID= 1 DT= 5.0 min
Area (ha)= 1.15
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.40
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 87.56 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 50.65
over (min) 5.00 15.00
Storage Coeff. (min)= 2.04 (ii) 13.45 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.30 0.04
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 30.24
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33

TOTALS
0.327 (iii)
3.00
66.41
91.90
0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6232)
ID= 1 DT= 5.0 min
Area (ha)= 0.85
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.30
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.28 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 50.65
over (min) 5.00 15.00
Storage Coeff. (min)= 1.87 (ii) 13.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.08

PEAK FLOW (cms)= 0.22 0.03
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 30.24
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33

TOTALS
0.242 (iii)
3.00
66.41
91.90
0.72

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0488)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6212):	1.15	0.327	3.00	66.41
+ ID2= 2 (6232):	0.85	0.242	3.00	66.41
=====				
ID = 3 (0488):	2.00	0.570	3.00	66.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6262)
ID= 1 DT= 5.0 min
Area (ha)= 0.96
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.58 0.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 80.00 40.00
Mannings n = 0.013 0.250

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

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68

1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.97
over (min) 5.00 15.00
Storage Coeff. (min)= 1.93 (ii) 10.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

PEAK FLOW (cms)= 0.23 0.06
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 46.42
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51

TOTALS
0.282 (iii)
3.00
70.10
91.90
0.76

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0346)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0342):	10.32	3.333	3.00	72.29
+ ID2= 2 (0488):	2.00	0.570	3.00	66.41
=====				
ID = 3 (0346):	12.32	3.903	3.00	71.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0346):	12.32	3.903	3.00	71.33
+ ID2= 2 (6131):	1.77	0.182	3.08	32.74
=====				
ID = 1 (0346):	14.09	4.060	3.00	66.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0346):	14.09	4.060	3.00	66.48
+ ID2= 2 (6262):	0.96	0.282	3.00	70.10
=====				
ID = 3 (0346):	15.05	4.341	3.00	66.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0447)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1070	0.3146
0.0150	0.1715	0.7100	0.8031

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0346)	15.050	4.341	3.00	66.71
OUTFLOW: ID= 1 (0447)	15.050	0.551	3.58	66.52

PEAK FLOW REDUCTION [Qout/Qin](%)= 12.70
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.6752

CALIB
STANDHYD (6202)
ID= 1 DT= 5.0 min

Area (ha)= 1.26
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

	IMPERVIOUS (ha)	PERVIOUS (i)
Surface Area (ha)=	1.18	8.00
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	91.65	40.00
Mannings n =	0.013	0.250

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

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

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

INFLOW : ID= 2 (6202) 1.260 0.483 3.00 82.56
OUTFLOW: ID= 1 (0491) 1.260 0.047 3.58 81.74

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.81
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0745

CALIB
STANDHYD (6062)
ID= 1 DT= 5.0 min

Area (ha)= 1.98
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i)
Surface Area (ha)=	1.29	0.69
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	114.89	40.00
Mannings n =	0.013	0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 50.65
over (min) 5.00 15.00
Storage Coeff. (min)= 2.40 (ii) 13.81 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 60.35
over (min) 5.00 5.00
Storage Coeff. (min)= 2.10 (ii) 4.60 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.31 0.23

PEAK FLOW (cms)= 0.47 0.01 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 0.483 (iii)
RUNOFF VOLUME (mm)= 85.90 30.24 82.56
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.90

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0491)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0580	0.0848
0.0090	0.0366	0.0000	0.0000

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

PEAK FLOW (cms)= 0.51 0.06 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.562 (iii)
RUNOFF VOLUME (mm)= 85.90 30.24 66.41
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.72

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

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6122)
ID= 1 DT= 5.0 min

Area (ha)= 2.18
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

	IMPERVIOUS (ha)	PERVIOUS (i)
Surface Area (ha)=	2.05	0.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	120.55	40.00
Mannings n =	0.013	0.250

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

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

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68

1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68
1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 60.35
over (min) 5.00 5.00
Storage Coeff. (min)= 2.47 (ii) 4.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.29 0.22
TOTALS
PEAK FLOW (cms)= 0.81 0.02 0.833 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 82.56
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.90

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(1000) | OVERFLOW IS OFF
IN= 2----> OUT= 1 |
DT= 5.0 min |
OUTFLOW (cms) | STORAGE (ha.m.) | OUTFLOW (cms) | STORAGE (ha.m.)
0.0000 0.0000 | 0.1000 0.1464
0.0159 0.0631 | 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (6122) 2.180 0.833 3.00 82.56
OUTFLOW: ID= 1 (1000) 2.180 0.082 3.58 82.10
PEAK FLOW REDUCTION [Qout/Qin](%)= 9.84
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1288

ADD HYD (0493) |
1 + 2 = 3 |
ID1= 1 (1000): 2.18 0.082 3.58 82.10
+ ID2= 2 (0491): 1.26 0.047 3.58 81.74

1.74 91.33 .819E+05 104.3 1.17 13.08
1.88 91.47 .103E+06 135.3 1.20 12.74
2.01 91.60 .128E+06 172.1 1.24 12.35
2.14 91.73 .154E+06 215.1 1.28 11.94
2.28 91.87 .183E+06 264.7 1.32 11.54
2.41 92.00 .215E+06 321.3 1.37 11.15

hydrograph <---- <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0493) 5.42 0.66 3.00 76.29 0.25 0.73
OUTFLOW: ID= 1 (0319) 5.42 0.34 3.08 76.28 0.18 0.60

CALIB |
STANDHYD (6162) | Area (ha)= 0.44
ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

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

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68

ID = 3 (0493): 3.44 0.129 3.58 81.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0493) |
3 + 2 = 1 |
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0493): 3.44 0.129 3.58 81.97
+ ID2= 2 (0062): 1.98 0.562 3.00 66.41

ID = 1 (0493): 5.42 0.656 3.00 76.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0319) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

DATA FOR SECTION (2135.9)
Distance Elevation Manning
0.00 92.50 0.0700
36.57 92.00 0.0700
90.03 91.00 0.0700
124.58 90.00 0.0700 / 0.0350 Main Channel
128.34 89.59 0.0350 Main Channel
129.84 89.59 0.0350 Main Channel
132.39 90.00 0.0350 / 0.0700 Main Channel
163.76 91.00 0.0700
187.47 91.00 0.0700
203.83 91.00 0.0700
306.44 92.00 0.0700

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 89.69 .215E+03 0.1 0.46 33.36
0.20 89.79 .579E+03 0.4 0.67 22.75
0.31 89.90 .109E+04 1.0 0.84 18.13
0.41 90.00 .175E+04 1.9 0.99 15.37
0.54 90.13 .324E+04 4.0 1.14 13.36
0.68 90.27 .581E+04 7.3 1.15 13.32
0.81 90.40 .945E+04 11.9 1.15 13.29
0.94 90.53 .142E+05 18.0 1.17 13.10
1.08 90.67 .200E+05 26.0 1.19 12.79
1.21 90.80 .268E+05 36.0 1.23 12.42
1.34 90.93 .348E+05 48.2 1.27 12.03
1.48 91.07 .464E+05 58.3 1.15 13.27
1.61 91.20 .629E+05 78.8 1.15 13.30

1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68
1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.97
over (min) 5.00 10.00
Storage Coeff. (min)= 1.53 (ii) 6.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.33 0.15
TOTALS
PEAK FLOW (cms)= 0.14 0.02 0.157 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 46.42 77.21
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.84

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB |
STANDHYD (6102) | Area (ha)= 2.49
ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

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

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68

0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 282.45
over (min) 5.00 10.00
Storage Coeff. (min)= 2.58 (ii) 8.31 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.13

PEAK FLOW (cms)= 0.49 0.33 0.824 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 66.47 76.18
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.72 0.83

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6242)
ID= 1 DT= 5.0 min
Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

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

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

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

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.97
over (min) 5.00 10.00
Storage Coeff. (min)= 1.89 (ii) 6.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.14

PEAK FLOW (cms)= 0.28 0.04 0.316 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 46.42 77.21
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.84

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0489)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6102): 2.49 0.824 3.00 76.18
+ ID2= 2 (6162): 0.44 0.157 3.00 77.21
===== ID = 3 (0489): 2.93 0.980 3.00 76.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0489)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0489): 2.93 0.980 3.00 76.34
+ ID2= 2 (6242): 0.89 0.316 3.00 77.21
===== ID = 1 (0489): 3.82 1.296 3.00 76.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0490)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.1760 0.2330
0.0280 0.0927 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0489) 3.820 1.296 3.00 76.54
OUTFLOW: ID= 1 (0490) 3.820 0.143 3.58 76.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.04
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.2019

CALIB
STANDHYD (6192)
ID= 1 DT= 5.0 min
Area (ha)= 1.64
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.07 0.57
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

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

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

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

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 103.33
over (min) 5.00 15.00
Storage Coeff. (min)= 2.27 (ii) 10.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.42 0.10 0.513 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 51.79 73.96
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.56 0.80

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0319): 5.42 0.343 3.08 76.28
+ ID2= 2 (0447): 15.05 0.551 3.58 66.52
===== ID = 3 (0318): 20.47 0.810 3.50 69.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0318):	20.47	0.810	3.50	69.10
+ ID2= 2 (0490):	3.82	0.143	3.58	76.32
=====				
ID = 1 (0318):	24.29	0.952	3.50	70.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0318):	24.29	0.952	3.50	70.24
+ ID2= 2 (6192):	1.64	0.513	3.00	73.96
=====				
ID = 3 (0318):	25.93	1.268	3.00	70.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0127):	29.73	1.770	3.00	42.45
+ ID2= 2 (0318):	25.93	1.268	3.00	70.47
=====				
ID = 3 (0128):	55.66	3.037	3.00	55.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	55.66	3.037	3.00	55.50
+ ID2= 2 (0603):	111.60	2.684	4.50	32.44
=====				
ID = 1 (0128):	167.26	4.327	4.33	40.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->			
Distance	Elevation	Manning	
0.00	86.75	0.0900	
3.09	87.40	0.0900	
18.33	87.41	0.0900	
35.33	86.99	0.0900	
73.84	86.75	0.0900	
103.33	86.41	0.0900	
120.33	86.11	0.0900	
129.46	86.13	0.0900	
143.37	85.32	0.0900	
154.33	85.02	0.0900	
161.57	85.09	0.0900	
163.05	84.78	0.0900 / 0.0700	Main Channel
166.55	83.78	0.0700	Main Channel
168.05	84.78	0.0700 / 0.1100	Main Channel
172.02	85.29	0.1100	
191.39	86.19	0.1100	
270.18	85.78	0.1100	
296.33	86.36	0.1100	
324.34	86.68	0.1100	
368.56	87.05	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0128)	167.26	4.33	4.33	40.12	2.26
OUTFLOW: ID= 1 (0604)	167.26	3.17	5.00	40.11	2.10

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB			
NASHYD (6041)			
ID= 1 DT= 5.0 min	Area (ha)=	1.70	Curve Number (CN)= 79.0
	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	4.12	

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

CALIB			
STANDHYD (6042)			
ID= 1 DT= 5.0 min	Area (ha)=	22.30	
	Total Imp(%)=	65.00	Dir. Conn.(%)= 53.00
IMPERVIOUS			
Surface Area (ha)=	14.49	7.81	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	385.57	40.00	
Mannings n	=	0.013	0.250

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 7.500
RUNOFF VOLUME (mm)= 46.483
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.506

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

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68
Max.Eff.Inten.(mm/hr)= 143.36 142.59							
over (min)= 5.00 15.00							
Storage Coeff. (min)= 4.97 (ii) 12.51 (iii)							
Unit Hyd. Tpeak (min)= 5.00 15.00							
Unit Hyd. peak (cms)= 0.22 0.08							
TOTALS							
PEAK FLOW (cms)=	4.48	1.88	6.101 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08	3.00				
RUNOFF VOLUME (mm)=	85.90	54.22	71.01				
TOTAL RAINFALL (mm)=	91.90	91.90	91.90				
RUNOFF COEFFICIENT =	0.93	0.59	0.77				

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0041):	1.70	0.028	7.50	46.48
+ ID2= 2 (0042):	22.30	6.101	3.00	71.01
=====				
ID = 3 (0129):	24.00	6.101	3.00	69.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0129):	24.00	6.101	3.00	69.27
+ ID2= 2 (0004):	167.26	3.168	5.00	40.11
=====				
ID = 3 (0130):	191.26	7.172	3.00	43.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)	
IN= 2---> OUT= 1	
Routing time step (min)'= 5.00	

<----- DATA FOR SECTION (801.4) ----->			
Distance	Elevation	Manning	
0.00	82.95	0.1100	
3.78	82.95	0.1100	
9.24	82.49	0.1100	
50.67	82.10	0.1100	
105.12	82.17	0.1100	
119.34	81.56	0.1100	
150.67	81.66	0.1100	
157.23	82.37	0.1100	
190.03	82.57	0.1100	
223.75	82.27	0.1100	

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.027 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 44.055
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.479

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

CALIB STANDHYD (6112)	
ID= 1 DT= 5.0 min	
Area (ha)=	10.80
Total Imp(%)=	62.00
Dir. Conn.(%)=	50.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	6.70	4.10	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	268.33	40.00	
Mannings n =	0.013	0.250	

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

252.32	82.50	0.1100	
254.65	81.95	0.1100 /0.0700	Main Channel
258.15	80.95	0.0700	Main Channel
259.65	81.95	0.0700 /0.1100	Main Channel
263.15	82.90	0.1100	
278.14	82.80	0.1100	
282.35	81.68	0.1100	
285.02	82.19	0.1100	
336.56	82.53	0.1100	
404.40	82.68	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

		<---- hydrograph ---->				<-pipe / channel->	
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0130)	191.26	7.17	3.00	43.77	1.07	0.36	
OUTFLOW: ID= 1 (0005)	191.26	3.46	5.08	43.77	0.92	0.30	

CALIB NASHYD (6111)		Area (ha)=	Curve Number (CN)=
ID= 1 DT= 5.0 min		Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)= 1.08	

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

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.027 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 44.055
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.479

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

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36
over (min)= 5.00
Storage Coeff. (min)= 4.00 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.24

TOTALS
PEAK FLOW (cms)= 2.09
TIME TO PEAK (hrs)= 3.00
RUNOFF VOLUME (mm)= 85.90
TOTAL RAINFALL (mm)= 91.90
RUNOFF COEFFICIENT = 0.93

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

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6111):	0.60	0.027	4.08	44.05
+ ID2= 2 (6112):	10.80	2.849	3.00	67.47

=====

ID = 3 (0137): 11.40 2.854 3.00 66.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):	11.40	2.854	3.00	66.24
+ ID2= 2 (0605):	191.26	3.455	5.08	43.77
=====				
ID = 3 (0139):	202.66	5.181	3.00	45.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6051)	Area (ha)=	0.40	Curve Number (CN)=	66.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	1.31		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 32.772
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.357

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6052)	Area (ha)=	15.50		
ID= 1 DT= 5.0 min	Total Imp(%)=	66.00	Dir. Conn.(%)=	54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.23	5.27
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	321.46	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 108.20
over (min) 5.00 15.00
Storage Coeff. (min)= 4.46 (ii) 12.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.23 0.08

TOTALS

PEAK FLOW (cms)=	3.21	0.92	3.982 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	40.47	65.00
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.44	0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6051):	0.40	0.012	4.42	32.77
+ ID2= 2 (6052):	15.50	3.982	3.00	65.00
=====				
ID = 3 (0131):	15.90	3.983	3.00	64.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0131):	15.90	3.983	3.00	64.19
+ ID2= 2 (0139):	202.66	5.181	3.00	45.03
=====				
ID = 3 (0132):	218.56	9.165	3.00	46.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)				
IN= 2--> OUT= 1	Routing time step (min)=	5.00		

<----- DATA FOR SECTION (350.0) ----->

Distance	Elevation	Manning
0.00	81.70	0.1100
3.84	81.72	0.1100
5.87	80.72	0.1100

9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100
85.61	81.14	0.1100
93.32	80.00	0.1100
95.04	80.45	0.1100
102.72	80.66	0.1100
110.13	78.93	0.1100 / 0.0700
118.05	78.63	0.0700
124.40	78.89	0.0700 / 0.1100
132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.56	9.16	3.00	46.43	0.79	0.74
OUTFLOW: ID= 1 (0530)	218.56	7.14	3.08	46.43	0.71	0.71

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

Area (ha)= 5.80
Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.48 2.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 101.50
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.32 (ii) 11.96 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

TOTALS
PEAK FLOW (cms)= 1.09 0.39 1.419 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 39.44 61.74
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.43 0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0530):	218.56	7.135	3.08	46.43
+ ID2= 2 (5302):	5.80	1.419	3.00	61.74
ID = 3 (0134):	224.36	7.994	3.00	46.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	274.04	13.087	3.00	50.58
+ ID2= 2 (0134):	224.36	7.994	3.00	46.82
ID = 3 (0135):	498.40	21.081	3.00	48.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (40.0) -----

Distance	Elevation	Manning
0.00	79.36	0.0900
7.45	79.32	0.0900
13.77	79.27	0.0900
20.24	79.24	0.0900
27.28	79.26	0.0900
34.16	79.13	0.0900
40.79	79.05	0.0900
47.58	79.05	0.0900
54.30	79.07	0.0900
60.87	79.24	0.0900
71.39	79.48	0.0900
73.53	78.96	0.0900

76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

----- hydrograph -----<-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.40	21.08	3.00	48.89	2.18	0.93
OUTFLOW: ID= 1 (0507)	498.40	17.40	3.25	48.89	2.02	0.88

CALIB
NASHYD (5071)
ID= 1 DT= 5.0 min

Area (ha)= 8.40 Curve Number (CN)= 74.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.72

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51	
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51	
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51	
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51	
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51	
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51	
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68	
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68	
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68	
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68	
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68	
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68	
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68	
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68	
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68	
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68	
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68	
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68	

Max.Eff.Inten.(mm/hr)= 143.36 118.43
over (min) 5.00 15.00
Storage Coeff. (min)= 5.95 (ii) 14.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08

PEAK FLOW (cms)= 4.50 4.16 8.002 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 47.07 58.72
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5071):	8.40	0.245	4.92	40.65
+ ID2= 2 (5072):	40.50	8.002	3.00	58.72
=====				
ID = 3 (0121):	48.90	8.023	3.00	55.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	48.90	8.023	3.00	55.61
+ ID2= 2 (0507):	498.40	17.401	3.25	48.89
=====				
ID = 3 (0122):	547.30	22.418	3.17	49.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)				
ID= 1 DT= 5.0min				
	AREA (ha)	TPEAK (hrs)	VOLUME (mm)	
	253.60	0.78	15.58	
			47.57	

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	'	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25		94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25		94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25		94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25		94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25		94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25		94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25		94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24		94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24		94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24		94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23		94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24		94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24		95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24		95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23		95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23		95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23		95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23		95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23		95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24		95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23		95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23		95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23		95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23		95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24		96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24		96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24		96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24		96.25	0.24	127.58	0.18

2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17

6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.15
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.14
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15

27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

| STORE HYD(1605)| AREA (ha)= 218.70
| ID= 1 DT= 5.0min | QPEAK (cms)= 1.37
----- TPEAK (hrs)= 71.92
VOLUME (mm)= 85.77

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25

3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.26
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27

28.58 0.18 59.83 0.48 91.08 0.42 122.33 0.18 153.58 0.11
28.67 0.18 59.92 0.47 91.17 0.42 122.42 0.18 153.67 0.11
28.75 0.18 60.00 0.47 91.25 0.42 122.50 0.18 153.75 0.11
28.83 0.18 60.08 0.47 91.33 0.41 122.58 0.18 153.83 0.11
28.92 0.18 60.17 0.46 91.42 0.41 122.67 0.18 153.92 0.11
29.00 0.18 60.25 0.46 91.50 0.41 122.75 0.18 154.00 0.11
29.08 0.18 60.33 0.45 91.58 0.41 122.83 0.18 154.08 0.11
29.17 0.18 60.42 0.45 91.67 0.41 122.92 0.18 154.17 0.11
29.25 0.17 60.50 0.44 91.75 0.41 123.00 0.18 154.25 0.11
29.33 0.17 60.58 0.44 91.83 0.40 123.08 0.18 154.33 0.11
29.42 0.17 60.67 0.44 91.92 0.40 123.17 0.18 154.42 0.11
29.50 0.17 60.75 0.43 92.00 0.40 123.25 0.18 154.50 0.11
29.58 0.17 60.83 0.43 92.08 0.40 123.33 0.18 154.58 0.11
29.67 0.17 60.92 0.42 92.17 0.40 123.42 0.18 154.67 0.11
29.75 0.17 61.00 0.42 92.25 0.39 123.50 0.18 154.75 0.11
29.83 0.17 61.08 0.42 92.33 0.39 123.58 0.18 154.83 0.11
29.92 0.16 61.17 0.42 92.42 0.39 123.67 0.18 154.92 0.11
30.00 0.16 61.25 0.41 92.50 0.39 123.75 0.18 155.00 0.11
30.08 0.16 61.33 0.41 92.58 0.38 123.83 0.18 155.08 0.11
30.17 0.16 61.42 0.40 92.67 0.38 123.92 0.18 155.17 0.11
30.25 0.16 61.50 0.40 92.75 0.38 124.00 0.18 155.25 0.11
30.33 0.16 61.58 0.40 92.83 0.38 124.08 0.18 155.33 0.11
30.42 0.16 61.67 0.40 92.92 0.38 124.17 0.18 155.42 0.11
30.50 0.16 61.75 0.39 93.00 0.37 124.25 0.18 155.50 0.11
30.58 0.16 61.83 0.39 93.08 0.37 124.33 0.19 155.58 0.11
30.67 0.16 61.92 0.39 93.17 0.37 124.42 0.19 155.67 0.11
30.75 0.16 62.00 0.38 93.25 0.37 124.50 0.19 155.75 0.11
30.83 0.15 62.08 0.38 93.33 0.37 124.58 0.19 155.83 0.10
30.92 0.15 62.17 0.38 93.42 0.37 124.67 0.20 155.92 0.11
31.00 0.15 62.25 0.38 93.50 0.37 124.75 0.20 156.00 0.10
31.08 0.15 62.33 0.39 93.58 0.37 124.83 0.20
31.17 0.15 62.42 0.39 93.67 0.37 124.92 0.20

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V V I SSSS U U A L (v 6.2.2018)
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\V02\voin.dat

Output filename:
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Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\77e6094b-e712-4929-aa89-8eb2e68c3ec7\

DATE: 04-10-2024 TIME: 01:34:39

USER:

COMMENTS: _____

** SIMULATION : SvrII6.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\d550afd7-b542-4ce9-bff9-b1d2bb7f65fd\d5e9b3f9
Ptotal= 56.50 mm Comments: Mount Hope-6 hour SCS Distribution Design

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.26	1.50	5.65	3.00	12.43	4.50	3.39
0.17	2.26	1.67	5.65	3.17	12.43	4.67	3.39
0.33	2.26	1.83	5.65	3.33	12.43	4.83	3.39
0.50	3.39	2.00	6.78	3.50	5.65	5.00	2.26
0.67	3.39	2.17	6.78	3.67	5.65	5.17	2.26
0.83	3.39	2.33	6.78	3.83	5.65	5.33	2.26
1.00	3.39	2.50	33.90	4.00	4.52	5.50	2.26
1.17	3.39	2.67	61.02	4.17	4.52	5.67	2.26
1.33	3.39	2.83	88.14	4.33	4.52	5.83	2.26

CALIB
NASHYD (5011)
ID= 1 DT= 5.0 min
Area (ha)= 80.20 Curve Number (CN)= 65.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.208 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 12.696
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.225

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 37.32
Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 498.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 31.75
over (min)= 5.00 25.00
Storage Coeff. (min)= 7.05 (ii) 20.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.17 0.05

TOTALS
PEAK FLOW (cms)= 1.98 1.00 2.505 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 15.46 23.87
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.27 0.42

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100) 1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	1.208	3.92	12.70
+ ID2= 2 (5012):	37.32	2.505	3.00	23.87
=====				
ID = 3 (0100):	117.52	2.734	3.00	16.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502) IN= 2--> OUT= 1		Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.175 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 13.430
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.238

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB NASHYD (5021) ID= 1 DT= 5.0 min				Area (ha)= 3.67	Curve Number (CN)= 68.8
				Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
				U.H. Tp(hrs)= 0.43	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39				
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39				
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39				
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39				
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39				
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39				
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26				
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26				
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26				
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26				
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26				
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26				
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26				
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26				
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26				
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26				
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26				
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26				

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.102 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 14.392
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.255

1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.849E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

		<---- hydrograph ---->			<-pipe / channel->		
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0100)	117.52	2.73	3.00	16.24	0.94	0.86	
OUTFLOW: ID= 1 (0502)	117.52	1.95	3.67	16.24	0.80	0.79	

CALIB NASHYD (5691) ID= 1 DT= 5.0 min		Area (ha)= 2.30	Curve Number (CN)= 69.3
		Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)= 0.07	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39				
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39				
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39				
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39				
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39				
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39				
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26				
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26				
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26				
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26				
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26				
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26				
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26				
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26				
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26				
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26				
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26				
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26				

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0575) ID= 1 DT= 5.0 min		Area (ha)= 0.78	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00

		IMPERVIOUS		PERVIOUS (i)	
		(ha)=		(ha)=	
Surface Area	(ha)=	0.51		0.27	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	72.11		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39				
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39				
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39				
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39				
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39				
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39				
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26				
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26				
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26				
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26				
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26				
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26				
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26				
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26				
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26				
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26				
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26				
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26				

Max.Eff.Inten.(mm/hr)=	88.14	31.87
over (min)	5.00	20.00
Storage Coeff. (min)=	2.21 (ii)	15.94 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.30	0.07

PEAK FLOW (cms)=	0.12	0.01	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.17	0.133 (iii)
RUNOFF VOLUME (mm)=	50.50	18.63	3.00
			39.33

TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5082)
ID= 1 DT= 5.0 min

Area (ha)= 0.71
Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.52 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 68.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 34.69

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 17.74
over (min)= 5.00 20.00
Storage Coeff. (min)= 1.97 (ii) 19.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.31 0.06

PEAK FLOW (cms)= 0.08 0.01 0.088 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 12.49 37.18
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.22 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min

Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39

over (min)= 5.00 20.00
Storage Coeff. (min)= 2.15 (ii) 15.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.31 0.07

PEAK FLOW (cms)= 0.11 0.01 0.118 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 15.57 37.91
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.28 0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0568)
ID= 1 DT= 5.0 min

Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26

0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 38.81
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.19 (ii) 14.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.14 0.01 0.154 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 22.36 44.30
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.40 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5092)
ID= 1 DT= 5.0 min

Area (ha)= 1.73
Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26
Max.Eff.Inten.(mm/hr)=	88.14		38.81				
over (min)	5.00		20.00				
Storage Coeff. (min)=	2.80 (ii)		15.49 (ii)				
Unit Hyd. Tpeak (min)=	5.00		20.00				
Unit Hyd. peak (cms)=	0.28		0.07				
PEAK FLOW (cms)=	0.21		0.05		*TOTALS*		
TIME TO PEAK (hrs)=	3.00		3.17		0.248 (iii)		
RUNOFF VOLUME (mm)=	50.50		22.36		36.59		
TOTAL RAINFALL (mm)=	56.50		56.50		56.50		
RUNOFF COEFFICIENT =	0.89		0.40		0.65		

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0501)	Area (ha)=	6.23	
ID= 1 DT= 5.0 min	Total Imp(%)=	42.00	Dir. Conn.(%)= 42.00
	IMPERVIOUS	PERVIOUS (i)	

Surface Area	(ha)=	2.62	3.61
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	203.00	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5282)	Area (ha)=	2.08	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.35	0.73
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	117.76	40.00
Mannings n	=	0.013	0.250
NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.			

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26
Max.Eff.Inten.(mm/hr)=	88.14		39.29				
over (min)	5.00		20.00				
Storage Coeff. (min)=	2.96 (ii)		15.59 (ii)				
Unit Hyd. Tpeak (min)=	5.00		20.00				
Unit Hyd. peak (cms)=	0.28		0.07				
PEAK FLOW (cms)=	0.33		0.05		*TOTALS*		
TIME TO PEAK (hrs)=	3.00		3.17		0.358 (iii)		
RUNOFF VOLUME (mm)=	50.50		22.62		40.74		
TOTAL RAINFALL (mm)=	56.50		56.50		56.50		
RUNOFF COEFFICIENT =	0.89		0.40		0.72		

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	6.23	0.660	3.00	27.15
+ ID2= 2 (5021):	3.67	0.102	3.33	14.39
ID = 3 (0481):	9.90	0.710	3.00	22.42
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	9.90	0.710	3.00	22.42
+ ID2= 2 (5082):	0.71	0.118	3.00	37.91
ID = 1 (0481):	10.61	0.828	3.00	23.46
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	10.61	0.828	3.00	23.46
+ ID2= 2 (5092):	1.73	0.248	3.00	36.59
ID = 3 (0481):	12.34	1.076	3.00	25.30
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.				

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.

(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 12.34 1.076 3.00 25.30
+ ID2= 2 (0510): 0.76 0.154 3.00 44.30

ID = 1 (0481): 13.10 1.230 3.00 26.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 13.10 1.230 3.00 26.40
+ ID2= 2 (5282): 2.08 0.358 3.00 40.74

ID = 3 (0481): 15.18 1.588 3.00 28.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 15.18 1.588 3.00 28.37
+ ID2= 2 (0568): 0.53 0.088 3.00 37.18

ID = 1 (0481): 15.71 1.676 3.00 28.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 15.71 1.676 3.00 28.66
+ ID2= 2 (5691): 2.30 0.175 3.00 13.43

ID = 3 (0481): 18.01 1.851 3.00 26.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 18.01 1.851 3.00 26.72

+ ID2= 2 (0575): 0.78 0.133 3.00 39.33
=====

ID = 1 (0481): 18.79 1.984 3.00 27.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| NASHYD (0524) | Area (ha)= 7.22 Curve Number (CN)= 80.7
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.20

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 0.393

PEAK FLOW (cms)= 0.534 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 21.458
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.380

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

| NASHYD (0522) | Area (ha)= 3.31 Curve Number (CN)= 63.1
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.16

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.143 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 11.870
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.210

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0580) | Area (ha)= 1.87
| ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 0.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 111.65 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 17.74
over (min) 5.00 25.00
Storage Coeff. (min)= 2.87 (ii) 20.22 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.28 0.05

TOTALS
PEAK FLOW (cms)= 0.29 0.02 0.304 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 12.49 37.19
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.22 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

| STANDHYD (0519)| Area (ha)= 2.08
|ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86
over (min) 5.00 25.00
Storage Coeff. (min)= 2.96 (ii) 20.67 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.28 0.05
PEAK FLOW (cms)= 0.33 0.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.33 0.337 (iii)
RUNOFF VOLUME (mm)= 50.50 11.92 36.99
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 42.01
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0298)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0519): 2.08 0.337 3.00 36.99
+ ID2= 2 (0529): 1.80 0.346 3.00 42.01
=====

ID = 3 (0298): 3.88 0.683 3.00 39.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0298)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0298): 3.88 0.683 3.00 39.32
+ ID2= 2 (0580): 1.87 0.304 3.00 37.19
=====

ID = 1 (0298): 5.75 0.987 3.00 38.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0296)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0298): 5.75 0.987 3.00 38.63
+ ID2= 2 (0522): 3.31 0.143 3.08 11.87
=====

ID = 3 (0296): 9.06 1.129 3.00 28.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (0529)| Area (ha)= 1.80
|ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86
over (min) 5.00 25.00
Storage Coeff. (min)= 2.84 (ii) 20.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.28 0.05
PEAK FLOW (cms)= 0.34 0.01 *TOTALS*
0.346 (iii)

| CALIB
| STANDHYD (0523)| Area (ha)= 6.61
|ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 86.10
over (min) 5.00 15.00
Storage Coeff. (min)= 4.19 (ii) 13.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
PEAK FLOW (cms)= 0.78 0.22 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.968 (iii)
RUNOFF VOLUME (mm)= 50.50 21.71 36.10
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.38 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0291)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0296):	9.06	1.129	3.00	28.85
+ ID2= 2 (0523):	6.61	0.968	3.00	36.10
=====				
ID = 3 (0291):	15.67	2.097	3.00	31.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0525)		Area (ha)= 1.45
ID= 1 DT= 5.0 min		Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.94	0.51
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	98.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	31.33	
over (min)	5.00	20.00	
Storage Coeff. (min)=	2.66 (ii)	16.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.29	0.06	
TOTALS			
PEAK FLOW (cms)=	0.23	0.02	0.245 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	18.34	39.24
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.32	0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0304)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0291):	15.67	2.097	3.00	31.91
+ ID2= 2 (0525):	1.45	0.245	3.00	39.24
=====				
ID = 3 (0304):	17.12	2.343	3.00	32.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0295)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0304):	17.12	2.343	3.00	32.53
+ ID2= 2 (0524):	7.22	0.534	3.08	21.46
=====				
ID = 3 (0295):	24.34	2.823	3.00	29.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0527)		Area (ha)= 1.68
ID= 1 DT= 5.0 min		Total Imp(%)= 76.00 Dir. Conn.(%)= 52.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.28	0.40
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	105.83	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	126.57	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.78 (ii)	10.69 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.28	0.09	
			TOTALS
PEAK FLOW (cms)=	0.21	0.09	0.291 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	50.50	32.10	41.66
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.57	0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0301)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0295):	24.34	2.823	3.00	29.25
+ ID2= 2 (0527):	1.68	0.291	3.00	41.66
=====				
ID = 3 (0301):	26.02	3.114	3.00	30.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (0520)		Area (ha)= 2.27
ID= 1 DT= 5.0 min		Total Imp(%)= 61.00 Dir. Conn.(%)= 61.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.38	0.89
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	123.02	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26

0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 33.98
over (min) 5.00 20.00
Storage Coeff. (min)= 3.04 (ii) 16.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.27 0.06

TOTALS
PEAK FLOW (cms)= 0.33 0.05 0.366 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 19.77 38.51
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.35 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0305)						
1 + 2 = 3						
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0301):		26.02	3.114	3.00	30.05	
+ ID2= 2 (0520):		2.27	0.366	3.00	38.51	
=====						
ID = 3 (0305):		28.29	3.479	3.00	30.73	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0445)							
IN= 2----> OUT= 1							
DT= 5.0 min							
OVERFLOW IS OFF							
		OUTFLOW	STORAGE	OUTFLOW	STORAGE		
		(cms)	(ha.m.)	(cms)	(ha.m.)		
		0.0000	0.0000	0.1400	0.8343		
		0.0195	0.2416	0.2360	1.0014		
		0.0700	0.5564	0.3420	1.6616		

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0305)	28.290	3.479	3.00	30.73
OUTFLOW: ID= 1 (0445)	28.290	0.118	6.00	30.55

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.39
TIME SHIFT OF PEAK FLOW (min)=180.00
MAXIMUM STORAGE USED (ha.m.)= 0.7475

CALIB			
STANDHYD (0526)			
ID= 1 DT= 5.0 min			
		Area (ha)= 0.94	
		Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.73	0.21
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	79.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 34.13
over (min) 5.00 20.00

Storage Coeff. (min)= 2.34 (ii) 15.69 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.07

TOTALS
PEAK FLOW (cms)= 0.18 0.01 0.186 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 19.85 43.75
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.35 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0310)							
IN= 2----> OUT= 1							
DT= 5.0 min							
OVERFLOW IS OFF							
		OUTFLOW	STORAGE	OUTFLOW	STORAGE		
		(cms)	(ha.m.)	(cms)	(ha.m.)		
		0.0000	0.0000	0.0476	0.0432		
		0.0096	0.0220	0.0579	0.0480		
		0.0206	0.0306	0.0671	0.0528		
		0.0297	0.0360	0.0000	0.0000		
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
INFLOW : ID= 2 (0526)		0.940	0.186	3.00	43.75		
OUTFLOW: ID= 1 (0310)		0.940	0.018	3.67	43.14		

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.64
TIME SHIFT OF PEAK FLOW (min)= 40.00
MAXIMUM STORAGE USED (ha.m.)= 0.0286

CALIB			
STANDHYD (0574)			
ID= 1 DT= 5.0 min			
		Area (ha)= 1.44	
		Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.12	0.32
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	97.98	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 26.59
over (min) 5.00 20.00
Storage Coeff. (min)= 2.65 (ii) 17.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.06

TOTALS
PEAK FLOW (cms)= 0.27 0.01 0.281 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 15.73 42.84
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.28 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0307)		OVERFLOW IS OFF
IN= 2----> OUT= 1		

Max. Eff. Inten. (mm/hr)=	88.14	29.87	
over (min)	5.00	20.00	
Storage Coeff. (min)=	3.19 (ii)	17.28 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.27	0.06	
			TOTALS
PEAK FLOW (cms)=	0.39	0.05	0.417 (iii)

TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 17.54 37.31
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.31 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0317)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0314):	30.90	4.279	3.00	36.05
+ ID2= 2 (0573):	2.66	0.417	3.00	37.31
=====				
ID = 3 (0317):	33.56	4.695	3.00	36.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0446)
IN= 2---> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2300	1.1312
0.0230	0.3704	0.2810	1.3850
0.0900	0.8066	0.4120	2.2335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0317)	33.560	4.695	3.00	36.15
OUTFLOW: ID= 1 (0446)	33.560	0.186	5.42	35.56

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.96
TIME SHIFT OF PEAK FLOW (min)=145.00
MAXIMUM STORAGE USED (ha.m.)= 1.0295

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

ID1= 1 (0306): 2.38 0.045 3.58 42.73
+ ID2= 2 (0445): 28.29 0.118 6.00 30.55
=====

ID = 3 (0102): 30.67 0.153 5.00 31.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	30.67	0.153	5.00	31.49
+ ID2= 2 (0446):	33.56	0.186	5.42	35.56
=====				
ID = 1 (0102):	64.23	0.338	5.17	33.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0102):	64.23	0.338	5.17	33.62
+ ID2= 2 (0481):	18.79	1.984	3.00	27.24
=====				
ID = 3 (0102):	83.02	2.092	3.00	32.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	83.02	2.092	3.00	32.18
+ ID2= 2 (0502):	117.52	1.949	3.67	16.24
=====				
ID = 1 (0102):	200.54	3.234	3.00	22.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900

25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 / 0.0700
127.36	84.21	0.0700
128.86	84.21	0.0700
130.86	85.21	0.0700 / 0.0900
131.88	86.36	0.0900
140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ---->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0102)	200.54	3.23	3.00	22.84	1.01	0.90
OUTFLOW: ID= 1 (0503)	200.54	2.68	3.08	22.84	0.92	0.85

CALIB
NASHYD (5031)
ID= 1 DT= 5.0 min

Area (ha)	Ia (mm)	U.H. Tp(hrs)
1.70	8.00	0.82

Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 15.449
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.273

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)	Total Imp(%)	Dir. Conn.(%)
12.20	59.00	47.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 42.47
over (min) 5.00 20.00
Storage Coeff. (min)= 5.04 (ii) 17.28 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06
PEAK FLOW (cms)= 1.34 0.33
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 50.50 19.39
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.34

TOTALS

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	214.44	4.07	3.00	23.41	0.70
OUTFLOW: ID= 1 (0504)	214.44	3.00	3.50	23.41	0.66

CALIB
NASHYD (5041)
ID= 1 DT= 5.0 min
Area (ha)= 0.30
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.89
Curve Number (CN)= 68.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39

ADD HYD (0103)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5031):	1.70	0.032	3.83	15.45
+ ID2= 2 (5032):	12.20	1.556	3.00	34.01
=====				
ID = 3 (0103):	13.90	1.562	3.00	31.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0103):	13.90	1.562	3.00	31.74
+ ID2= 2 (0503):	200.54	2.683	3.08	22.84
=====				
ID = 3 (0104):	214.44	4.073	3.00	23.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2---- OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	

0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 13.992
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.248

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5042)	Area (ha)= 7.40	Total Imp(%)= 66.00	Dir. Conn.(%)= 54.00
ID= 1 DT= 5.0 min			

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.88 2.52
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 222.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 42.02
over (min) 5.00 20.00
Storage Coeff. (min)= 4.34 (ii) 16.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06

TOTALS
PEAK FLOW (cms)= 0.95 0.17 1.057 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 18.42 35.74
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)						
1 + 2 = 3						
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (5041):		0.30	0.005	3.92	13.99	
+ ID2= 2 (5042):		7.40	1.057	3.00	35.74	
=====						
ID = 3 (0105):		7.70	1.058	3.00	34.89	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)							
1 + 2 = 3							
		AREA	QPEAK	TPEAK	R.V.		

		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):		7.70	1.058	3.00	34.89
+ ID2= 2 (0504):		214.44	3.001	3.50	23.41
=====					
ID = 3 (0106):		222.14	3.306	3.17	23.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (5211)		Area	(ha)= 1.90	Curve Number	(CN)= 77.0
ID= 1 DT= 5.0 min		Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
		U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.040 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 18.912
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.335

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5212)		Area	(ha)= 13.80		
ID= 1 DT= 5.0 min		Total Imp(%)=	52.00	Dir. Conn.(%)=	40.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.18 6.62
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 48.55
over (min) 5.00 20.00
Storage Coeff. (min)= 5.23 (ii) 16.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS
PEAK FLOW (cms)= 1.28 0.51 1.624 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 22.65 33.79
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.40 0.60

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5211):		1.90	0.040	4.00	18.91
+ ID2= 2 (5212):		13.80	1.624	3.00	33.79
=====					
ID = 3 (0112):		15.70	1.631	3.00	31.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):		222.14	3.306	3.17	23.81
+ ID2= 2 (0112):		15.70	1.631	3.00	31.99
=====					
ID = 3 (0114):		237.84	4.889	3.00	24.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)					
IN= 2---> OUT= 1		Routing time step (min)'= 5.00			

<----- DATA FOR SECTION (553.6) ----->					
Distance	Elevation	Manning			
0.00	81.24	0.1100			
33.01	80.98	0.1100			
49.97	81.27	0.1100			
54.18	80.35	0.1100			
60.88	81.23	0.1100			
69.13	79.02	0.1100			
92.42	79.04	0.1100			
98.70	80.89	0.1100			
128.88	81.13	0.1100			
199.00	81.23	0.1100			
266.11	81.68	0.1100			
306.94	81.73	0.1100			
331.74	81.55	0.1100 /0.0700	Main Channel		

336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ---->			<-pipe / channel->		
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0114)	237.84	4.89	3.00	24.35	0.49
OUTFLOW: ID= 1 (0505)	237.84	4.36	3.00	24.35	0.46

CALIB	Area (ha)=	1.30	Curve Number (CN)=	68.0
NASHYD (5051)	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.62		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.027 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 13.998
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.248

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	14.60
STANDHYD (5052)	Total Imp(%)=	66.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	54.00

IMPERVIOUS (i)		PERVIOUS (i)	
Surface Area (ha)=	9.64	Dep. Storage (mm)=	8.90
Average Slope (%)=	1.00	Length (m)=	311.98
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	42.02
over (min)	5.00	20.00
Storage Coeff. (min)=	5.32 (ii)	17.61 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.21	0.06
PEAK FLOW (cms)=	1.82	0.32
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	18.42
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.33

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (5051):	1.30	0.027	3.58	14.00
+ ID2= 2 (5052):	14.60	2.038	3.00	35.74
ID = 3 (0107):	15.90	2.046	3.00	33.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0107):	15.90	2.046	3.00	33.96
+ ID2= 2 (0505):	237.84	4.359	3.00	24.35
ID = 3 (0108):	253.74	5.895	3.00	24.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)	Routing time step (min)'=	5.00
IN= 2----> OUT= 1		

DATA FOR SECTION (304.1) ----->			
Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 / 0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 / 0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88

0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ---->			<-pipe / channel->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.74	5.89	3.00	24.95	1.32
OUTFLOW: ID= 1 (0506)	253.74	5.59	3.08	24.95	1.16

CALIB			
NASHYD (5061)	Area (ha)=	3.90	Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.62	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26

Max.Eff.Inten.(mm/hr)=	88.14	45.50
over (min)	5.00	20.00
Storage Coeff. (min)	4.41 (ii)	16.31 (ii)
Unit Hyd. Tpeak (min)	5.00	20.00
Unit Hyd. peak (cms)	0.23	0.06
PEAK FLOW (cms)=	0.98	0.20
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	19.99
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.35

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (5061):	3.90	0.090	3.58
+ ID2= 2 (5062):	7.80	1.110	3.00
ID = 3 (0109):	11.70	1.138	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0109):	11.70	1.138	3.00
+ ID2= 2 (0506):	253.74	5.590	3.08
ID = 3 (0110):	265.44	6.217	3.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (5101)	Area (ha)=	0.80	Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00

1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)=	0.090 (i)
TIME TO PEAK (hrs)=	3.583
RUNOFF VOLUME (mm)=	15.450
TOTAL RAINFALL (mm)=	56.500
RUNOFF COEFFICIENT =	0.273

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5062)	Area (ha)=	7.80	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)= 53.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	5.07		2.73
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	228.04		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

U.H. Tp(hrs)= 1.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)=	0.008 (i)
TIME TO PEAK (hrs)=	4.667
RUNOFF VOLUME (mm)=	13.112
TOTAL RAINFALL (mm)=	56.500
RUNOFF COEFFICIENT =	0.232

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5102)	Area (ha)=	0.90	
ID= 1 DT= 5.0 min	Total Imp(%)=	50.00	Dir. Conn.(%)= 35.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	0.45		0.45
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	77.46		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39		
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39		
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39		
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39		
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39		
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39		
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26		
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26		
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26		
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26		
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26		
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26		
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26		
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26		
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26		
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26		
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26		
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26		

Max.Eff.Inten.(mm/hr)= 88.14 36.65
over (min) 5.00 20.00
Storage Coeff. (min)= 2.31 (ii) 15.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.07

TOTALS
PEAK FLOW (cms)= 0.08 0.03 0.095 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 16.79 28.58
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0115) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.

	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0115)	1.70	0.10	3.00	21.30	0.02	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.07	3.08	21.30	0.01	0.24

| CALIB |
| NASHYD (5111) | Area (ha)= 1.90 Curve Number (CN)= 67.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.56

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39		
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39		
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39		
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39		
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39		
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39		
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26		
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26		
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26		
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26		
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26		
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26		
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26		
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26		
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26		
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26		
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26		
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26		

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.041 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 13.548
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.240

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5101):	0.80	0.008	4.67	13.11
+ ID2= 2 (5102):	0.90	0.095	3.00	28.58

ID = 3 (0115):	1.70	0.096	3.00	21.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0511) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (553.6) -----			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 /0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 /0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

----- TRAVEL TIME TABLE -----					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

| CALIB |
| STANDHYD (5112) | Area (ha)= 1.10
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.55	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	85.63	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39		
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39		
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39		
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39		
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39		
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39		
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26		
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26		
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26		
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26		
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26		
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26		
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26		
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26		
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26		
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26		
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26		
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26		

Max.Eff.Inten.(mm/hr)= 88.14 42.91
over (min) 5.00 15.00
Storage Coeff. (min)= 2.45 (ii) 14.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS
PEAK FLOW (cms)= 0.09 0.04 0.127 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 19.48 30.33
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.34 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)					
1 + 2 = 3					

ID1= 1 (5111):	1.90	0.041	3.58	13.55	
+ ID2= 2 (5112):	1.10	0.127	3.00	30.33	
=====					
ID = 3 (0116):	3.00	0.142	3.00	19.70	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0116):	3.00	0.142	3.00	19.70	
+ ID2= 2 (0511):	1.70	0.068	3.08	21.30	
=====					
ID = 3 (0117):	4.70	0.210	3.00	20.28	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)	
IN= 2----> OUT= 1	
Routing time step (min)'= 5.00	

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning	
0.00	80.80	0.0900	
9.73	80.46	0.0900	
14.10	82.04	0.0900	
17.18	82.28	0.0900	
41.13	82.12	0.0900 / 0.0700	Main Channel
46.88	79.71	0.0700	Main Channel
51.41	80.90	0.0700 / 0.0900	Main Channel
94.29	80.56	0.0900	
175.64	80.72	0.0900	
192.09	80.85	0.0900	

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME

0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.010 (i)
TIME TO PEAK (hrs)= 4.250
RUNOFF VOLUME (mm)= 15.447
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.273

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5122)	
ID= 1 DT= 5.0 min	
Area (ha)=	3.20
Total Imp(%)=	60.00
Dir. Conn.(%)=	47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.92	1.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	146.06	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26

(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0117)	4.70	0.21	3.00	20.28	0.45
OUTFLOW: ID= 1 (0512)	4.70	0.11	3.33	20.27	0.35

CALIB	
NASHYD (5121)	
ID= 1 DT= 5.0 min	
Area (ha)=	0.70
Ia (mm)=	8.00
U.H. Tp(hrs)=	1.14
Curve Number (CN)=	71.0
# of Linear Res.(N)=	3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26

Max.Eff.Inten.(mm/hr)=	88.14	44.41
over (min)	5.00	20.00
Storage Coeff. (min)=	3.37 (ii)	15.39 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.26	0.07
PEAK FLOW (cms)=	0.36	0.09
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	19.78
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.35
TOTALS		
PEAK FLOW (cms)=	0.425 (iii)	
TIME TO PEAK (hrs)=	3.00	
RUNOFF VOLUME (mm)=	34.21	
TOTAL RAINFALL (mm)=	56.50	
RUNOFF COEFFICIENT =	0.61	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5121):	0.70	0.010	4.25	15.45
+ ID2= 2 (5122):	3.20	0.425	3.00	34.21
=====				
ID = 3 (0118):	3.90	0.427	3.00	30.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0118):	3.90	0.427	3.00	30.84
+ ID2= 2 (0512):	4.70	0.115	3.33	20.27
=====				

ID = 3 (0119): 8.60 0.513 3.00 25.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0110):	265.44	6.217	3.08	25.14
+ ID2= 2 (0119):	8.60	0.513	3.00	25.07

ID = 3 (0120):	274.04	6.596	3.00	25.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6011)	Area (ha)	Ia (mm)	Curve Number (CN)=	# of Linear Res.(N)=
ID= 1 DT= 5.0 min	44.10	8.00	62.0	3.00

	U.H. Tp(hrs)=	0.83		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.608 (i)

TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6012)	Area (ha)=	Total Imp(%)=	Dir. Conn.(%)=
ID= 1 DT= 5.0 min	11.00	28.00	16.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	3.08	7.92		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	270.80	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26
Max.Eff.Inten.(mm/hr)=		88.14	26.15				
over (min)		5.00	20.00				
Storage Coeff. (min)=		4.88 (ii)	19.74 (ii)				
Unit Hyd. Tpeak (min)=		5.00	20.00				
Unit Hyd. peak (cms)=		0.22	0.06				

PEAK FLOW (cms)= 0.41 0.30 *TOTALS* 0.600 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.46 19.39
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.34

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6011):	44.10	0.608	3.92	11.52
+ ID2= 2 (6012):	11.00	0.600	3.00	19.39

ID = 3 (0124):	55.10	0.784	3.50	13.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)	Area (ha)	Ia (mm)	Curve Number (CN)=	# of Linear Res.(N)=
ID= 1 DT= 5.0 min	43.60	8.00	62.0	3.00

	U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26

0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.545 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6022)	Area (ha)=	Total Imp(%)=	Dir. Conn.(%)=
ID= 1 DT= 5.0 min	12.90	35.00	23.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	4.51	8.38		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	293.26	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26

0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 26.96
over (min) 5.00 20.00
Storage Coeff. (min)= 5.12 (ii) 19.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS

PEAK FLOW (cms)= 0.69 0.33 0.896 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.66 22.13
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.39

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6021):	43.60	0.545	4.00	11.52
+ ID2= 2 (6022):	12.90	0.896	3.00	22.13
=====				
ID = 3 (0125):	56.50	0.981	3.00	13.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	0.784	3.50	13.09
+ ID2= 2 (0125):	56.50	0.981	3.00	13.94
=====				
ID = 3 (0126):	111.60	1.699	3.00	13.52

2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<--- hydrograph --->				<-pipe / channel->	
INFLOW : ID= 2 (0126)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
OUTFLOW: ID= 1 (0603)	111.60	1.70	3.00	13.52	0.57
	111.60	1.06	4.67	13.52	0.53

CALIB			
NASHYD (6031)	Area (ha)= 19.00	Curve Number (CN)= 72.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.32		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.261 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 15.971
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.283

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->					
Distance	Elevation	Manning			
0.00	92.58	0.1400			
8.54	92.59	0.1400			
22.11	92.47	0.1400			
48.74	91.83	0.1400			
67.59	91.58	0.1400			
86.45	91.21	0.1400			
103.50	90.80	0.1400			
118.09	90.23	0.1400			
127.84	90.09	0.1400 /0.0700	Main Channel		
129.84	89.59	0.0700	Main Channel		
130.34	90.09	0.0700 /0.1400	Main Channel		
140.57	90.14	0.1400			
161.87	90.11	0.1400			
177.03	90.04	0.1400			
188.67	89.87	0.1400			
199.59	90.31	0.1400			
212.02	90.96	0.1400			
225.58	91.35	0.1400			
252.71	91.66	0.1400			
274.11	91.86	0.1400			

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6032)	Area (ha)= 10.73		
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00	Dir. Conn.(%)= 15.00	

IMPERVIOUS			
Surface Area (ha)=	3.00	PERVIOUS (i)	7.73
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	267.46		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 37.12
over (min) 5.00 20.00
Storage Coeff. (min)= 4.85 (ii) 17.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS

PEAK FLOW (cms)= 0.38 0.44 0.664 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 18.53 23.33

TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.41

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0127)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6031):	19.00	0.261	4.50	15.97
+ ID2= 2 (6032):	10.73	0.664	3.00	23.33
=====				
ID = 3 (0127):	29.73	0.688	3.00	18.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6131)
ID= 1 DT= 5.0 min

Area (ha)=	Curve Number (CN)=
1.77	66.0
Ia (mm)=	# of Linear Res.(N)=
8.00	3.00
U.H. Tp(hrs)=	
0.22	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.070 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 13.099
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.232

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6222)
ID= 1 DT= 5.0 min

Area (ha)=	Total Imp(ha)=	Dir. Conn.(%)=
2.02	78.00	78.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	1.58	0.44
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26

1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 21.42
over (min) 5.00 20.00
Storage Coeff. (min)= 2.94 (ii) 19.03 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.06

TOTALS

PEAK FLOW (cms)= 0.38 0.02 0.392 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 14.88 42.66
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.26 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6142)
ID= 1 DT= 5.0 min

Area (ha)=	Total Imp(ha)=	Dir. Conn.(%)=
1.50	69.00	50.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	1.04	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	100.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 49.89
over (min) 5.00 15.00
Storage Coeff. (min)= 2.69 (ii) 14.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS

PEAK FLOW (cms)= 0.18 0.04 0.216 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 18.47 34.48
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6152)
ID= 1 DT= 5.0 min

Area (ha)=	Total Imp(ha)=	Dir. Conn.(%)=
2.14	78.00	78.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	1.67	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	119.44	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 21.42
over (min) 5.00 20.00
Storage Coeff. (min)= 2.99 (ii) 19.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.06

TOTALS

PEAK FLOW (cms)= 0.40 0.02 0.415 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 14.88 42.66
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.26 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (6182)	1.49	1.16	0.33
ID= 1 DT= 5.0 min	78.00	6.00	8.00
Surface Area	(ha)=		
Dep. Storage	(mm)=		

Average Slope (%)= 1.00 1.00
Length (m)= 99.67 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 106.27
over (min) 5.00 15.00
Storage Coeff. (min)= 2.68 (ii) 11.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS

PEAK FLOW (cms)= 0.18 0.06 0.231 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 50.50 23.69 37.09
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.42 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (6302)	0.86	0.81	0.05
ID= 1 DT= 5.0 min	94.00	6.00	8.00
Surface Area	(ha)=		
Dep. Storage	(mm)=		
Average Slope	(%)=		
Length	(m)=		
Mannings n	=		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 24.07
over (min) 5.00 10.00
Storage Coeff. (min)= 2.27 (ii) 5.31 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.16

TOTALS

PEAK FLOW (cms)= 0.20 0.00 0.200 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 48.18
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	IMPERVIOUS	PERVIOUS (i)
STANDHYD (6172)	2.31	1.80	0.51
ID= 1 DT= 5.0 min	78.00	6.00	8.00
Surface Area	(ha)=		
Dep. Storage	(mm)=		
Average Slope	(%)=		
Length	(m)=		
Mannings n	=		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 123.95
over (min) 5.00 15.00
Storage Coeff. (min)= 3.06 (ii) 11.03 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.09

TOTALS
 PEAK FLOW (cms)= 0.28 0.11 0.372 (iii)
 TIME TO PEAK (hrs)= 3.00 3.08 3.00
 RUNOFF VOLUME (mm)= 50.50 27.66 39.08
 TOTAL RAINFALL (mm)= 56.50 56.50 56.50
 RUNOFF COEFFICIENT = 0.89 0.49 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 69.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6142):	1.50	0.216	3.00	34.48
+ ID2= 2 (6152):	2.14	0.415	3.00	42.66
=====				
ID = 3 (0342):	3.64	0.631	3.00	39.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0342):	3.64	0.631	3.00	39.29
+ ID2= 2 (6172):	2.31	0.372	3.00	39.08
=====				
ID = 1 (0342):	5.95	1.003	3.00	39.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0342):	5.95	1.003	3.00	39.21
+ ID2= 2 (6182):	1.49	0.231	3.00	37.09
=====				
ID = 3 (0342):	7.44	1.234	3.00	38.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0342):	7.44	1.234	3.00	38.78
+ ID2= 2 (6222):	2.02	0.392	3.00	42.66
=====				
ID = 1 (0342):	9.46	1.626	3.00	39.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0342)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0342):	9.46	1.626	3.00	39.61
+ ID2= 2 (6302):	0.86	0.200	3.00	48.18
=====				
ID = 3 (0342):	10.32	1.826	3.00	40.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6212)				
ID= 1 DT= 5.0 min				
	Area (ha)=	1.15		
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75	0.40
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	87.56	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86
 over (min) 5.00 25.00
 Storage Coeff. (min)= 2.48 (ii) 20.19 (ii)
 Unit Hyd. Tpeak (min)= 5.00 25.00
 Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
 PEAK FLOW (cms)= 0.18 0.01 0.187 (iii)
 TIME TO PEAK (hrs)= 3.00 3.33 3.00
 RUNOFF VOLUME (mm)= 50.50 11.92 36.99
 TOTAL RAINFALL (mm)= 56.50 56.50 56.50
 RUNOFF COEFFICIENT = 0.89 0.21 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (6232)				
ID= 1 DT= 5.0 min				
	Area (ha)=	0.85		
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.55	0.30
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	75.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86
 over (min) 5.00 20.00
 Storage Coeff. (min)= 2.27 (ii) 19.98 (ii)
 Unit Hyd. Tpeak (min)= 5.00 20.00
 Unit Hyd. peak (cms)= 0.30 0.06

TOTALS
 PEAK FLOW (cms)= 0.13 0.01 0.140 (iii)
 TIME TO PEAK (hrs)= 3.00 3.25 3.00
 RUNOFF VOLUME (mm)= 50.50 11.92 36.98
 TOTAL RAINFALL (mm)= 56.50 56.50 56.50
 RUNOFF COEFFICIENT = 0.89 0.21 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0488)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6212):	1.15	0.187	3.00	36.99
+ ID2= 2 (6232):	0.85	0.140	3.00	36.98
=====				

ID = 3 (0488): 2.00 0.327 3.00 36.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6262)	Area (ha)=	0.96	
ID= 1 DT= 5.0 min	Total Imp(%)=	60.00	Dir. Conn.(%)= 60.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.58	0.38	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	80.00	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	34.84	
over (min)	5.00	20.00	
Storage Coeff. (min)=	2.35 (ii)	15.60 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.30	0.07	
PEAK FLOW (cms)=	0.14	0.02	0.155 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	20.24	38.38

TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0346)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0342):	10.32	1.826	3.00	40.32
+ ID2= 2 (0488):	2.00	0.327	3.00	36.98
=====				
ID = 3 (0346):	12.32	2.153	3.00	39.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0346):	12.32	2.153	3.00	39.78
+ ID2= 2 (6131):	1.77	0.070	3.00	13.10
=====				
ID = 1 (0346):	14.09	2.212	3.00	36.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0346)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0346):	14.09	2.212	3.00	36.43
+ ID2= 2 (6262):	0.96	0.155	3.00	38.38
=====				
ID = 3 (0346):	15.05	2.366	3.00	36.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0447) | OVERFLOW IS OFF

IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1070	0.3146
	0.0150	0.1715	0.7100	0.8031
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0346)	15.050	2.366	3.00	36.56
OUTFLOW: ID= 1 (0447)	15.050	0.207	4.00	36.36

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.76
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.3959

CALIB			
STANDHYD (6202)	Area (ha)=	1.26	
ID= 1 DT= 5.0 min	Total Imp(%)=	94.00	Dir. Conn.(%)= 94.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.18	0.08	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	91.65	40.00	
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26

1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26
Max.Eff.Inten.(mm/hr)=	88.14	24.07					
over (min)	5.00	10.00					
Storage Coeff. (min)=	2.55 (ii)	5.59 (ii)					
Unit Hyd. Tpeak (min)=	5.00	10.00					
Unit Hyd. peak (cms)=	0.29	0.16					
PEAK FLOW (cms)=	0.29	0.00				0.292 (iii)	
TIME TO PEAK (hrs)=	3.00	3.00				3.00	
RUNOFF VOLUME (mm)=	50.50	11.92				48.18	
TOTAL RAINFALL (mm)=	56.50	56.50				56.50	
RUNOFF COEFFICIENT =	0.89	0.21				0.85	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0491)				
IN= 2----> OUT= 1	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
DT= 5.0 min	0.0000	0.0000	0.0580	0.0848
	0.0090	0.0366	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (6202)	1.260	0.292	3.00	48.18
OUTFLOW: ID= 1 (0491)	1.260	0.018	4.00	47.37

PEAK FLOW REDUCTION [Qout/Qin](%)= 6.32
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0459

CALIB			
STANDHYD (6062)	Area (ha)=	1.98	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.29	0.69	
Dep. Storage (mm)=	6.00	8.00	

Average Slope (%)= 1.00 1.00
Length (m)= 114.89 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86
over (min) 5.00 25.00
Storage Coeff. (min)= 2.92 (ii) 20.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.28 0.05
TOTALS
PEAK FLOW (cms)= 0.31 0.02 0.321 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 36.99
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6122)
ID= 1 DT= 5.0 min

Area (ha)= 2.18
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.05 0.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 120.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 24.07
over (min) 5.00 10.00
Storage Coeff. (min)= 3.01 (ii) 6.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.28 0.15
TOTALS
PEAK FLOW (cms)= 0.50 0.01 0.503 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 48.18
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHW(0319)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->			
Distance	Elevation	Manning	
0.00	92.50	0.0700	
36.57	92.00	0.0700	
90.03	91.00	0.0700	
124.58	90.00	0.0700 /0.0350	Main Channel
128.34	89.59	0.0350	Main Channel
129.84	89.59	0.0350	Main Channel
132.39	90.00	0.0350 /0.0700	Main Channel
163.76	91.00	0.0700	
187.47	91.00	0.0700	
203.83	91.00	0.0700	
306.44	92.00	0.0700	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

<---- hydrograph ----> <-pipe / channel-->

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0493) 5.42 0.34 3.00 43.72 0.18 0.60
OUTFLOW: ID= 1 (0319) 5.42 0.16 3.08 43.71 0.12 0.48

RESERVOIR(1000)
IN= 2---> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

INFLOW : ID= 2 (6122)	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
	2.180	0.503	3.00	48.18
OUTFLOW: ID= 1 (1000)	2.180	0.032	4.00	47.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 6.41
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0793

ADD HYD (0493)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (1000):	2.18	0.032	4.00	47.72
+ ID2= 2 (0491):	1.26	0.018	4.00	47.37
=====				
ID = 3 (0493):	3.44	0.051	4.00	47.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0493)
3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0493):	3.44	0.051	4.00	47.59
+ ID2= 2 (0062):	1.98	0.321	3.00	36.99
=====				
ID = 1 (0493):	5.42	0.345	3.00	43.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6162)
ID= 1 DT= 5.0 min

Area (ha)= 0.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 34.84
over (min)= 5.00 20.00
Storage Coeff. (min)= 1.86 (ii) 15.11 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.32 0.07

PEAK FLOW (cms)= 0.08 0.01 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 0.088 (iii)
RUNOFF VOLUME (mm)= 50.50 20.24 43.82
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min

Area (ha)= 2.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 151.56
over (min)= 5.00 20.00
Storage Coeff. (min)= 3.13 (ii) 10.49 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.09

PEAK FLOW (cms)= 0.30 0.15 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.432 (iii)
RUNOFF VOLUME (mm)= 50.50 34.18 42.34
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.60 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6242)
ID= 1 DT= 5.0 min

Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26

1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 34.84
over (min)= 5.00 20.00
Storage Coeff. (min)= 2.30 (ii) 15.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.07

PEAK FLOW (cms)= 0.17 0.01 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 0.177 (iii)
RUNOFF VOLUME (mm)= 50.50 20.24 43.83
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0489)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6102):	2.49	0.432	3.00	42.34
+ ID2= 2 (6162):	0.44	0.088	3.00	43.82
=====				
ID = 3 (0489):	2.93	0.519	3.00	42.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0489)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0489):	2.93	0.519	3.00	42.56
+ ID2= 2 (6242):	0.89	0.177	3.00	43.83
=====				
ID = 1 (0489):	3.82	0.696	3.00	42.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0490)

OVERFLOW IS OFF

IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1760	0.2330
0.0280	0.0927	0.0000	0.0000

INFLOW : ID= 2 (0489)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
OUTFLOW: ID= 1 (0490)	3.820	0.696	3.00	42.86
	3.820	0.056	4.00	42.64

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.07
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.1195

CALIB
STANDHYD (6192)
ID= 1 DT= 5.0 min

Area (ha)= 1.64
Total Imp(%)= 65.00
Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	1.07	0.57
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	104.56	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26

1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14
over (min)= 40.77
Storage Coeff. (min)= 2.76 (ii)
Unit Hyd. Tpeak (min)= 15.20 (ii)
Unit Hyd. peak (cms)= 0.28
0.07

PEAK FLOW (cms)= 0.26
TIME TO PEAK (hrs)= 3.00
RUNOFF VOLUME (mm)= 50.50
TOTAL RAINFALL (mm)= 56.50
RUNOFF COEFFICIENT = 0.89

0.84
3.17
23.40
56.50
0.41
0.73

TOTALS
0.285 (iii)
3.00
41.01
56.50
0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0318)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0319):	5.42	0.162	3.08	43.71
+ ID2= 2 (0447):	15.05	0.207	4.00	36.36

=====

ID = 3 (0318): 20.47 0.324 3.58 38.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0318):	20.47	0.324	3.58	38.31
+ ID2= 2 (0490):	3.82	0.056	4.00	42.64

=====

ID = 1 (0318): 24.29 0.378 3.58 38.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0318)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0318):	24.29	0.378	3.58	38.99
+ ID2= 2 (6192):	1.64	0.285	3.00	41.01

=====

ID = 3 (0318): 25.93 0.542 3.00 39.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0127):	29.73	0.688	3.00	18.63
+ ID2= 2 (0318):	25.93	0.542	3.00	39.12

=====

ID = 3 (0128): 55.66 1.231 3.00 28.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0128):	55.66	1.231	3.00	28.17
+ ID2= 2 (0603):	111.60	1.061	4.67	13.52

=====

ID = 1 (0128): 167.26 1.773 4.50 18.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2---> OUT= 1

Routing time step (min)= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900

161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700
166.55	83.78	0.0700
168.05	84.78	0.0700 / 0.1100
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.26	1.77	4.50	18.39	1.80	0.09
OUTFLOW: ID= 1 (0604)	167.26	1.29	5.00	18.39	1.70	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
NASHYD (6041)
ID= 1 DT= 5.0 min

Area (ha)= 1.70
Ia (mm)= 8.00
U.H. Tp(hrs)= 4.12

Curve Number (CN)= 79.0
of Linear Res. (N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43
0.167	2.26	1.667	5.65	3.167	12.43
0.250	2.26	1.750	5.65	3.250	12.43
0.333	2.26	1.833	5.65	3.333	12.43
0.417	2.26	1.917	5.65	3.417	12.43
0.500	2.26	2.000	5.65	3.500	12.43
0.583	3.39	2.083	6.78	3.583	5.08
0.667	3.39	2.167	6.78	3.667	5.17
0.750	3.39	2.250	6.78	3.750	5.25
0.833	3.39	2.333	6.78	3.833	5.33
0.917	3.39	2.417	6.78	3.917	5.42
1.000	3.39	2.500	6.78	4.000	5.50
1.083	3.39	2.583	33.90	4.083	4.52
1.167	3.39	2.667	33.90	4.167	4.52
1.250	3.39	2.750	61.02	4.250	4.52
1.333	3.39	2.833	61.02	4.333	4.52
1.417	3.39	2.917	88.14	4.417	4.52
1.500	3.39	3.000	88.14	4.500	4.52

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 7.583
RUNOFF VOLUME (mm)= 20.270
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.359

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6042)	Area (ha)= 22.30
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 14.49		7.81
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 385.57		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43
0.167	2.26	1.667	5.65	3.167	12.43
0.250	2.26	1.750	5.65	3.250	12.43
0.333	2.26	1.833	5.65	3.333	12.43
0.417	2.26	1.917	5.65	3.417	12.43
0.500	2.26	2.000	5.65	3.500	12.43
0.583	3.39	2.083	6.78	3.583	5.08
0.667	3.39	2.167	6.78	3.667	5.17
0.750	3.39	2.250	6.78	3.750	5.25
0.833	3.39	2.333	6.78	3.833	5.33
0.917	3.39	2.417	6.78	3.917	5.42
1.000	3.39	2.500	6.78	4.000	5.50
1.083	3.39	2.583	33.90	4.083	4.52
1.167	3.39	2.667	33.90	4.167	4.52
1.250	3.39	2.750	61.02	4.250	4.52
1.333	3.39	2.833	61.02	4.333	4.52
1.417	3.39	2.917	88.14	4.417	4.52
1.500	3.39	3.000	88.14	4.500	4.52

Max.Eff.Inten.(mm/hr)= 88.14 58.52
over (min)= 5.00 20.00
Storage Coeff. (min)= 6.04 (ii) 16.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.06

TOTALS
PEAK FLOW (cms)= 2.69 0.73 3.189 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 25.34 38.67
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.45 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)
1 + 2 = 3

ID1= 1 (6041): 1.70 0.012 7.58 20.27
+ ID2= 2 (6042): 22.30 3.189 3.00 38.67

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6041):	1.70	0.012	7.58
+ ID2= 2 (6042):	22.30	3.189	3.00

<--- hydrograph --->					
AREA	QPEAK	TPEAK	R.V.	<-pipe / channel->	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0130)	191.26	3.63	3.00	20.77	0.93
OUTFLOW: ID= 1 (0605)	191.26	1.47	5.00	20.77	0.78

ID = 3 (0129): 24.00 3.189 3.00 37.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0129):	24.00	3.189	3.00
+ ID2= 2 (0604):	167.26	1.292	5.00
ID = 3 (0130):	191.26	3.628	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2---> OUT= 1

Routing time step (min)= 5.00

<----- DATA FOR SECTION (801.4) ----->		
Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 / 0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100
404.40	82.68	0.1100

<----- TRAVEL TIME TABLE ----->				
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY
(m)	(m)	(cu.m.)	(cms)	(m/s)
0.08	81.03	.125E+02	0.0	0.11
0.17	81.12	.499E+02	0.0	0.18
0.25	81.20	.112E+03	0.0	0.24

INFLOW : ID= 2 (0130) 191.26 3.63 3.00 20.77 0.93 0.30
OUTFLOW: ID= 1 (0605) 191.26 1.47 5.00 20.77 0.78 0.25

CALIB
NASHYD (6111)
ID= 1 DT= 5.0 min
U.H. Tp(hrs)= 1.08

Area (ha)= 0.60
Ia (mm)= 8.00
Curve Number (CN)= 77.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43
0.167	2.26	1.667	5.65	3.167	12.43
0.250	2.26	1.750	5.65	3.250	12.43
0.333	2.26	1.833	5.65	3.333	12.43
0.417	2.26	1.917	5.65	3.417	12.43
0.500	2.26	2.000	5.65	3.500	12.43
0.583	3.39	2.083	6.78	3.583	5.08
0.667	3.39	2.167	6.78	3.667	5.17
0.750	3.39	2.250	6.78	3.750	5.25
0.833	3.39	2.333	6.78	3.833	5.33
0.917	3.39	2.417	6.78	3.917	5.42
1.000	3.39	2.500	6.78	4.000	5.50

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.011 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 18.909
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.335

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6112)	Area (ha)= 10.80
ID= 1 DT= 5.0 min	Total Imp(%)= 62.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	6.70	4.10
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	268.33	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26

1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 49.77
over (min) 5.00 20.00
Storage Coeff. (min)= 4.86 (ii) 16.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

PEAK FLOW (cms)= 1.26 0.33 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 1.486 (iii)
RUNOFF VOLUME (mm)= 50.50 22.15 3.00
TOTAL RAINFALL (mm)= 56.50 56.50 36.32
RUNOFF COEFFICIENT = 0.89 0.39 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6111):	0.60	0.011	4.17	18.91
+ ID2= 2 (6112):	10.80	1.486	3.00	36.32
=====				
ID = 3 (0137):	11.40	1.487	3.00	35.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):	11.40	1.487	3.00	35.41
+ ID2= 2 (0605):	191.26	1.473	5.00	20.77
=====				
ID = 3 (0139):	202.66	2.556	3.00	21.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (6051)	Area (ha)= 0.40 Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.31

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 13.108
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.232

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6052)	Area (ha)= 15.50
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.23	5.27
Dep. Storage (mm)=	6.00	8.00

Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 39.50
over (min) 5.00 20.00
Storage Coeff. (min)= 5.41 (ii) 18.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

PEAK FLOW (cms)= 1.93 0.32 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.25 2.141 (iii)
RUNOFF VOLUME (mm)= 50.50 17.37 3.00
TOTAL RAINFALL (mm)= 56.50 56.50 35.26
RUNOFF COEFFICIENT = 0.89 0.31 0.62

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0051):	0.40	0.005	4.50	13.11
+ ID2= 2 (0052):	15.50	2.141	3.00	35.26
=====				
ID = 3 (0131):	15.90	2.141	3.00	34.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0131):	15.90	2.141	3.00	34.70
+ ID2= 2 (0139):	202.66	2.556	3.00	21.59
=====				
ID = 3 (0132):	218.56	4.698	3.00	22.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)				
IN= 2--> OUT= 1				
Routing time step (min)'= 5.00				
<----- DATA FOR SECTION (350.0) ----->				
Distance	Elevation	Manning		
0.00	81.70	0.1100		
3.84	81.72	0.1100		
5.87	80.72	0.1100		
9.38	81.42	0.1100		
49.64	81.07	0.1100		
80.61	80.72	0.1100		
85.61	81.14	0.1100		
93.32	80.00	0.1100		
95.04	80.45	0.1100		
102.72	80.66	0.1100		
110.13	78.93	0.1100 /0.0700	Main Channel	
118.05	78.63	0.0700	Main Channel	
124.40	78.89	0.0700 /0.1100	Main Channel	
132.18	79.61	0.1100		
139.34	79.23	0.1100		
144.67	79.43	0.1100		
149.63	79.98	0.1100		
153.42	79.79	0.1100		
158.56	80.58	0.1100		
176.89	81.15	0.1100		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ---->					<-pipe / channel-->
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0132)	218.56	4.70	3.00	22.55	0.59
OUTFLOW: ID= 1 (0530)	218.56	3.52	3.08	22.55	0.52

CALIB				
STANDHYD (5302)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	5.80	
	Total Imp(%)=	60.00	Dir. Conn.(%)=	48.00
=====				
	IMPERVIOUS	PERVIOUS	(i)	
Surface Area	(ha)=	3.48	2.32	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	196.64	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	36.65	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.03 (ii)	17.01 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.24	0.06	
TOTALS			
PEAK FLOW (cms)=	0.66	0.13	0.750 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	16.79	32.97
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.30	0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.56	3.524	3.08	22.55
+ ID2= 2 (5302):	5.80	0.750	3.00	32.97
=====				
ID = 3 (0134):	224.36	4.025	3.00	22.82

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37

1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<--- hydrograph --->						<-pipe / channel->	
INFLW : ID= 2 (0135)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
OUTFLOW: ID= 1 (0507)	498.40	10.62	3.00	24.09	1.65	0.78	
	498.40	8.10	3.33	24.09	1.48	0.73	

CALIB					
NASHYD (5071)	Area (ha)=	8.40	Curve Number (CN)=	74.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	1.72			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26

1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.101 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 17.077
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.302

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5072)	Area (ha)=	40.50	Dir. Conn.(%)=	30.00	
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00			

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 18.23 22.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 519.62 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39		
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39		
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39		
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39		
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39		
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39		
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26		
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26		
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26		
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26		
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26		
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26		
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26		
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26		
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26		
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26		
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26		

1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 45.45
over (min) 5.00 20.00
Storage Coeff. (min)= 7.22 (ii) 19.13 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.17 0.06
TOTALS
PEAK FLOW (cms)= 2.67 1.51 3.672 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 20.95 29.82
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.37 0.53

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (5071):	8.40	0.101	5.00	17.08	
+ ID2= 2 (5072):	40.50	3.672	3.00	29.82	
ID = 3 (0121):	48.90	3.677	3.00	27.63	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (0121):	48.90	3.677	3.00	27.63	
+ ID2= 2 (0507):	498.40	8.103	3.33	24.09	
ID = 3 (0122):	547.30	10.278	3.25	24.41	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)	AREA (ha)=	253.60			
ID= 1 DT= 5.0min	QPEAK (cms)=	0.78			
	TPEAK (hrs)=	15.58			

VOLUME (mm)= 47.57

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19

20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11

24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10

28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12

25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11

30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

Pre-Development - SCUBE

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V V I SSSS U U A L (v 6.2.2018)

V V I SS U U A A L

V V I SS U U A A A A L

V V I SS U U A A L

W I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM

O O T T H H Y Y MM MM O O

O O T T H H Y M M O O

000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\2c01411a-b55f-40aa-a8dd-4677af8fd07e\

Summary filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\2c01411a-b55f-40aa-a8dd-4677af8fd07e\

DATE: 04-10-2024 TIME: 01:16:43

USER:

COMMENTS: _____

** SIMULATION : 100yrHope_SCSII_6hr.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\

Ptotal=101.62 mm		ec528c0d-4c97-4ad9-80b7-e31bdfec4424\ff8cc32c							
		Comments: Mount Hope-6 hour SCS Distribution Desig							
	TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
	hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr
0.00	4.09	1.50	10.23	3.00	22.51	4.50	6.14		
0.17	4.09	1.67	10.23	3.17	22.51	4.67	6.14		
0.33	4.09	1.83	10.23	3.33	22.51	4.83	6.14		
0.50	6.14	2.00	12.28	3.50	10.23	5.00	4.09		
0.67	6.14	2.17	12.28	3.67	10.23	5.17	4.09		
0.83	6.14	2.33	12.28	3.83	10.23	5.33	4.09		
1.00	6.14	2.50	61.38	4.00	8.18	5.50	4.09		
1.17	6.14	2.67	110.48	4.17	8.18	5.67	4.09		
1.33	6.14	2.83	159.59	4.33	8.18				

CALIB					
NASHYD (5011)		Area (ha)=	80.20	Curve Number (CN)=	65.0
ID= 1 DT= 5.0 min		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
-----		U.H. Tp(hrs)=	0.85		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.787 (i)

TIME TO PEAK (hrs)= 3.833

RUNOFF VOLUME (mm)= 38.043

TOTAL RAINFALL (mm)= 101.620

RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5012)		Area	(ha)=	39.40	
ID= 1 DT= 5.0 min		Total Imp(%)=	38.00	Dir. Conn.(%)=	24.00
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	14.97	24.43		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	512.51	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)= 159.59 107.14

over (min) 5.00 15.00

Storage Coeff. (min)= 5.65 (ii) 14.10 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 3.93 4.06 7.301 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00

RUNOFF VOLUME (mm)= 95.62 43.76 56.20

TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.43 0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 65.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)				
1 + 2 = 3				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (5011):	80.20	3.787	3.83	38.04
+ ID2= 2 (5012):	39.40	7.301	3.00	56.20
=====				
ID = 3 (0100):	119.60	8.229	3.00	44.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)			
IN= 2---> OUT= 1		Routing time step (min)'=	5.00

<----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 /0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 /0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	

155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.10	86.94	.202E+03	0.0	0.25	78.80	
0.20	87.04	.452E+03	0.1	0.37	52.91	
0.30	87.14	.749E+03	0.3	0.47	42.34	
0.40	87.24	.109E+04	0.5	0.55	36.26	
0.50	87.34	.149E+04	0.8	0.62	32.18	
0.60	87.44	.193E+04	1.1	0.68	29.19	
0.70	87.54	.241E+04	1.5	0.74	26.87	
0.80	87.64	.295E+04	2.0	0.79	25.01	
0.90	87.74	.353E+04	2.5	0.84	23.46	
1.00	87.84	.421E+04	3.1	0.89	22.39	
1.10	87.94	.489E+04	4.5	0.63	31.56	
1.21	88.05	.150E+05	7.1	0.56	35.43	
1.33	88.17	.233E+05	10.6	0.54	36.49	
1.44	88.28	.346E+05	15.5	0.53	37.18	
1.56	88.40	.484E+05	22.8	0.56	35.35	
1.67	88.51	.634E+05	32.1	0.60	32.90	
1.79	88.63	.807E+05	41.2	0.61	32.65	
1.90	88.74	.101E+06	54.6	0.64	30.77	
2.02	88.86	.124E+06	64.7	0.62	31.85	

hydrograph						
AREA	OPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0100)	119.60	8.23	3.00	44.03	1.25	0.55
OUTFLOW: ID= 1 (0502)	119.60	5.08	3.83	44.02	1.13	0.61

CALIB	NASHYD (5021)	Area (ha)= 25.20	Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.46		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14

0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	97.19	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.98 (ii)	13.77 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
		TOTALS	
PEAK FLOW (cms)=	3.28	2.27	5.160 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	40.29	56.89
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.40	0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0101)	AREA	OPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5021):	25.20	0.724	4.58	35.16
+ ID2= 2 (5022):	25.90	5.160	3.00	56.89
ID = 3 (0101):	51.10	5.237	3.00	46.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.662

PEAK FLOW (cms)= 0.724 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 35.158
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	STANDHYD (5022)	Area (ha)= 25.90
ID= 1 DT= 5.0 min	Total Imp(%)= 42.00	Dir. Conn.(%)= 30.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	10.88	15.02		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	415.53	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14

ADD HYD (0102)	AREA	OPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0101):	51.10	5.237	3.00	46.17
+ ID2= 2 (0502):	119.60	5.084	3.83	44.02
ID = 3 (0102):	170.70	8.158	3.00	44.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	Routing time step (min)'= 5.00
IN= 2---> OUT= 1	

DATA FOR SECTION (1157.9)				
Distance	Elevation	Manning		
0.00	86.78	0.0900		
25.34	87.17	0.0900		
68.44	87.04	0.0900		
117.13	86.81	0.0900		
125.36	85.21	0.0900 / 0.0700	Main Channel	
127.36	84.21	0.0700	Main Channel	
128.86	84.21	0.0700	Main Channel	
130.86	85.21	0.0700 / 0.0900	Main Channel	
131.88	86.36	0.0900		
140.63	86.77	0.0900		
168.26	86.90	0.0900		
169.81	87.10	0.0900		
202.11	87.50	0.0900		
239.06	87.35	0.0900		
270.29	87.83	0.0900		
283.90	87.90	0.0900		
297.51	87.86	0.0900		
324.73	87.89	0.0900		
351.95	87.78	0.0900		
388.59	87.46	0.0900		

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89

1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ---->			<-pipe / channel->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	170.70	8.16	3.00	44.66	1.47
OUTFLOW: ID= 1 (0503)	170.70	7.61	3.08	44.66	1.43

CALIB			
NASHYD (5031)	Area (ha)= 1.70	Curve Number (CN)= 71.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.82		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.096 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 44.407
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.437

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5032)	Area (ha)= 12.20		
ID= 1 DT= 5.0 min	Total Imp(%)= 59.00	Dir. Conn.(%)= 47.00	

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 7.20		5.00
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 285.19		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 133.17

over (min)	5.00	15.00
Storage Coeff. (min)=	3.97 (ii)	11.72 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.09
		TOTALS
PEAK FLOW (cms)=	2.47	1.14
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	51.84
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (5031):	1.70	0.096	3.83
+ ID2= 2 (5032):	12.20	3.440	3.00
ID = 3 (0103):	13.90	3.465	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0103):	13.90	3.465	3.00
+ ID2= 2 (0503):	170.70	7.611	3.08
ID = 3 (0104):	184.60	10.236	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)			
IN= 2----> OUT= 1	Routing time step (min)= 5.00		

<----- DATA FOR SECTION (815.4) ----->
Distance Elevation Manning

19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900
217.10	82.90	0.0900
229.61	83.66	0.0900 /0.0700
232.80	81.85	0.0700
243.24	83.87	0.0700
257.77	84.06	0.0900
312.01	83.52	0.0900
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900
513.93	82.96	0.0900
526.85	83.23	0.0900
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->			<-pipe / channel->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	184.60	10.24	3.00	46.50	0.84
OUTFLOW: ID= 1 (0504)	184.60	8.20	3.25	46.50	0.81

CALIB			
NASHYD (5041)			
ID= 1 DT= 5.0 min			

Area (ha)=	0.30	Curve Number (CN)=	68.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.89		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 41.113
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.405

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5042)			
ID= 1 DT= 5.0 min			

Area (ha)=	7.40		
Total Imp(%)=	66.00	Dir. Conn.(%)=	54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.88	2.52
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	222.11	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 133.73
over (min) 5.00 15.00
Storage Coeff. (min)= 3.42 (ii) 11.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

TOTALS
PEAK FLOW (cms)= 1.74 0.58 2.236 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 49.77 74.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.49 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	0.30	0.015	3.92	41.11
+ ID2= 2 (5042):	7.40	2.236	3.00	74.53
=====				
ID = 3 (0105):	7.70	2.240	3.00	73.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	7.70	2.240	3.00	73.22
+ ID2= 2 (0504):	184.60	8.201	3.25	46.50
=====				
ID = 3 (0106):	192.30	8.885	3.25	47.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (5201)			
ID= 1 DT= 5.0 min			

Area (ha)=	22.80	Curve Number (CN)=	72.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	1.31		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09

1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.928 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 45.555
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.448

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5202)			
ID= 1 DT= 5.0 min			

Area (ha)=	6.90		
Total Imp(%)=	23.00	Dir. Conn.(%)=	12.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.59	5.31
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	214.48	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	113.06	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.35 (ii)	11.62 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.26	0.09	
			TOTALS
PEAK FLOW (cms)=	0.36	1.02	1.225 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	49.45	54.99
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.49	0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0111)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5201):	22.80	0.928	4.42	45.55
+ ID2= 2 (5202):	6.90	1.225	3.00	54.99
ID = 3 (0111):	29.70	1.350	3.00	47.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0521)	
IN= 2----> OUT= 1	Routing time step (min)= 5.00

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900 /0.0700	Main Channel

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)=	0.113 (i)
TIME TO PEAK (hrs)=	3.917
RUNOFF VOLUME (mm)=	51.711
TOTAL RAINFALL (mm)=	101.620
RUNOFF COEFFICIENT =	0.509

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5212)	Area (ha)= 13.80
ID= 1 DT= 5.0 min	Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.18	6.62
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14

513.93	82.96	0.0700	Main Channel
526.85	83.23	0.0700 /0.0900	Main Channel
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	83.00	.378E+02	0.0	0.11	83.81
0.09	83.05	.151E+03	0.0	0.17	52.79
0.14	83.09	.340E+03	0.1	0.22	40.29
0.18	83.14	.605E+03	0.3	0.27	33.26
0.23	83.18	.946E+03	0.5	0.32	28.66
0.27	83.23	.151E+04	0.9	0.33	27.77
0.32	83.27	.323E+04	1.8	0.31	29.51
0.37	83.32	.510E+04	3.2	0.34	26.44
0.42	83.37	.713E+04	5.0	0.38	23.61
0.46	83.42	.934E+04	7.3	0.42	21.44
0.51	83.47	.121E+05	10.0	0.45	20.23
0.56	83.52	.156E+05	13.4	0.47	19.44
0.61	83.57	.196E+05	17.7	0.49	18.52
0.66	83.61	.240E+05	22.8	0.52	17.49
0.71	83.66	.286E+05	28.4	0.54	16.75
0.75	83.71	.336E+05	34.7	0.56	16.14
0.80	83.76	.390E+05	41.8	0.58	15.55
0.85	83.81	.448E+05	49.8	0.60	14.99
0.90	83.86	.510E+05	58.8	0.63	14.46

		<---- hydrograph ---->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0111)	29.70	1.35	3.00	47.75	0.29	0.32
OUTFLOW: ID= 1 (0521)	29.70	1.03	4.67	47.73	0.28	0.32

CALIB	
NASHYD (5211)	Area (ha)= 1.90 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)=	0.113 (i)
TIME TO PEAK (hrs)=	3.917
RUNOFF VOLUME (mm)=	51.711
TOTAL RAINFALL (mm)=	101.620
RUNOFF COEFFICIENT =	0.509

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5212)	Area (ha)= 13.80
ID= 1 DT= 5.0 min	Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.18	6.62
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14

0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	143.83	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.12 (ii)	11.64 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.09	
			TOTALS
PEAK FLOW (cms)=	2.37	1.65	3.795 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	58.15	73.14
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.57	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5211):	1.90	0.113	3.92	51.71
+ ID2= 2 (5212):	13.80	3.795	3.00	73.14
ID = 3 (0112):	15.70	3.821	3.00	70.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0113)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0112):	15.70	3.821	3.00	70.55
+ ID2= 2 (0521):	29.70	1.031	4.67	47.73
=====				
ID = 3 (0113):	45.40	4.279	3.00	55.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	192.30	8.885	3.25	47.57
+ ID2= 2 (0113):	45.40	4.279	3.00	55.62
=====				
ID = 3 (0114):	237.70	12.423	3.00	49.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)		Routing time step (min)'= 5.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (553.6) ----->			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 / 0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.084 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 41.118
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.405

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		STANDHYD (5052)		Area (ha)= 14.60	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00		
ID= 1 DT= 5.0 min							

ID1= 1 (0107): 15.90 4.367 3.00 71.80
+ ID2= 2 (0505): 237.70 11.814 3.08 49.11
=====

ID = 3 (0108): 253.60 14.830 3.00 50.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900
45.97	80.05	0.0900
65.23	79.93	0.0900
84.49	80.35	0.0900
113.49	80.02	0.0900
136.48	80.07	0.0900
188.81	79.81	0.0900
197.86	79.25	0.0900 / 0.0700
200.70	78.22	0.0700
203.29	79.35	0.0700 / 0.0900
204.01	79.67	0.0900
236.47	80.40	0.0900
277.80	80.48	0.0900
305.35	80.37	0.0900
346.67	80.41	0.0900
387.99	80.33	0.0900
415.54	80.53	0.0900
447.88	80.49	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08

TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 44.407
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.437

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5062)
ID= 1 DT= 5.0 min

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.07	2.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	228.04	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51
0.167	4.09	1.667	10.23	3.167	22.51
0.250	4.09	1.750	10.23	3.250	22.51
0.333	4.09	1.833	10.23	3.333	22.51
0.417	4.09	1.917	10.23	3.417	22.51
0.500	4.09	2.000	10.23	3.500	22.51
0.583	6.14	2.083	12.28	3.583	10.23
0.667	6.14	2.167	12.28	3.667	10.23
0.750	6.14	2.250	12.28	3.750	10.23
0.833	6.14	2.333	12.28	3.833	10.23
0.917	6.14	2.417	12.28	3.917	10.23
1.000	6.14	2.500	12.28	4.000	10.23
1.083	6.14	2.583	61.38	4.083	8.18
1.167	6.14	2.667	61.38	4.167	8.18
1.250	6.14	2.750	110.48	4.250	8.18
1.333	6.14	2.833	110.48	4.333	8.18
1.417	6.14	2.917	159.59	4.417	8.18
1.500	6.14	3.000	159.59	4.500	8.18

Max.Eff.Inten.(mm/hr)= 159.59 140.91
over (min) 5.00 15.00
Storage Coeff. (min)= 3.47 (ii) 11.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	<-pipe / channel-> MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0108)	253.60	14.83	3.00	50.53	1.74	0.94
OUTFLOW: ID= 1 (0506)	253.60	13.49	3.17	50.53	1.71	1.00

CALIB
NASHYD (5061)
ID= 1 DT= 5.0 min

Area (ha)= 3.90
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.62

Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.273 (i)

PEAK FLOW (cms)= 1.80 0.67 2.375 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 52.92 75.55
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.52 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5061):	3.90	0.273	3.58	44.41
+ ID2= 2 (5062):	7.80	2.375	3.00	75.55
ID = 3 (0109):	11.70	2.477	3.00	65.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0109):	11.70	2.477	3.00	65.17
+ ID2= 2 (0506):	253.60	13.488	3.17	50.53
ID = 3 (0110):	265.30	14.658	3.17	51.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5101)
ID= 1 DT= 5.0 min

Area (ha)= 0.80
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.42

Curve Number (CN)= 66.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 39.043
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.384

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5102)	Area (ha)= 0.90		
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00	Dir. Conn.(%)= 35.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.45	0.45	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	77.46	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 120.33
over (min) 5.00 10.00
Storage Coeff. (min)= 1.82 (ii) 9.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.11

TOTALS
PEAK FLOW (cms)= 0.14 0.10 0.241 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 46.47 63.67
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.46 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (5101):	0.80	0.026	4.58	39.04	
+ ID2= 2 (5102):	0.90	0.241	3.00	63.67	
ID = 3 (0115):	1.70	0.244	3.00	52.08	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)			
IN= 2----> OUT= 1	Routing time step (min)= 5.00		

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ---->

<-pipe / channel->

INFLOW : ID= 2 (0115)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
OUTFLOW: ID= 1 (0511)	1.70	0.18	3.08	52.08	0.03	0.24

CALIB			
NASHYD (5111)	Area (ha)= 1.90	Curve Number (CN)= 67.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.56		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.128 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 40.070
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.394

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5112)	Area (ha)= 1.10	Dir. Conn.(%)= 35.00	
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00		

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.55

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 85.63 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 134.29
over (min) 5.00 10.00
Storage Coeff. (min)= 1.93 (ii) 9.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.11

PEAK FLOW (cms)= 0.17 0.14
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 52.00
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.51

TOTALS
0.313 (iii)
0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

----- hydrograph -----				<-pipe / channel->			
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL		
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)		
INFLOW : ID= 2 (0117)	4.70	0.53	3.00	50.78	0.64	0.41	
OUTFLOW: ID= 1 (0512)	4.70	0.32	3.25	50.77	0.54	0.36	

CALIB
NASHYD (5121)
ID= 1 DT= 5.0 min
Area (ha)= 0.70
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.14
Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09

ADD HYD (0116)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5111): 1.90 0.128 3.50 40.07
+ ID2= 2 (5112): 1.10 0.313 3.00 67.26
ID = 3 (0116): 3.00 0.366 3.00 50.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0116): 3.00 0.366 3.00 50.04
+ ID2= 2 (0511): 1.70 0.175 3.08 52.08
ID = 3 (0117): 4.70 0.533 3.00 50.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2---> OUT= 1 |
Routing time step (min)'= 5.00

----- DATA FOR SECTION (484.2) ----->
Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 / 0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 / 0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71
0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71

1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.023
PEAK FLOW (cms)= 0.031 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 44.405
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.437

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min
Area (ha)= 3.20
Total Imp(%)= 60.00
Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.92 1.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 146.06 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09

1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 138.15
over (min) 5.00 15.00
Storage Coeff. (min)= 2.66 (ii) 10.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

PEAK FLOW (cms)= 0.66 0.32 0.934 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 52.54 72.79
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.52 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118) |
1 + 2 = 3 |

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (5121): 0.70 0.031 4.17 44.40
+ ID2= 2 (5122): 3.20 0.934 3.00 72.79
ID = 3 (0118): 3.90 0.939 3.00 67.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119) |
1 + 2 = 3 |

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0118): 3.90 0.939 3.00 67.69
+ ID2= 2 (0512): 4.70 0.324 3.25 50.77
ID = 3 (0119): 8.60 1.194 3.00 58.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120) |
1 + 2 = 3 |

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0110): 265.30 14.658 3.17 51.17
+ ID2= 2 (0119): 8.60 1.194 3.00 58.44
ID = 3 (0120): 273.90 15.396 3.17 51.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB |
NASHYD (6011) | Area (ha)= 44.10 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.942 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB |
STANDHYD (6012) |
ID= 1 DT= 5.0 min |

Area (ha)= 11.00
Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.08 7.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 91.88
over (min) 5.00 15.00
Storage Coeff. (min)= 3.85 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

PEAK FLOW (cms)= 0.76 1.16 1.726 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.35 48.35
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124) |
1 + 2 = 3 |

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (6011): 44.10 1.942 3.83 35.16
+ ID2= 2 (6012): 11.00 1.726 3.00 48.35
ID = 3 (0124): 55.10 2.327 3.50 37.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB |
NASHYD (6021) | Area (ha)= 43.60 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09

1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.734 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min

Area (ha)= 12.90
Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 | 1.583 10.23 | 3.083 22.51 | 4.58 6.14
0.167 4.09 | 1.667 10.23 | 3.167 22.51 | 4.67 6.14
0.250 4.09 | 1.750 10.23 | 3.250 22.51 | 4.75 6.14
0.333 4.09 | 1.833 10.23 | 3.333 22.51 | 4.83 6.14
0.417 4.09 | 1.917 10.23 | 3.417 22.51 | 4.92 6.14
0.500 4.09 | 2.000 10.23 | 3.500 22.51 | 5.00 6.14
0.583 6.14 | 2.083 12.28 | 3.583 10.23 | 5.08 4.09
0.667 6.14 | 2.167 12.28 | 3.667 10.23 | 5.17 4.09
0.750 6.14 | 2.250 12.28 | 3.750 10.23 | 5.25 4.09
0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09

1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 94.24
over (min) 5.00 15.00
Storage Coeff. (min)= 4.04 (ii) 12.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 1.28 1.26 2.325 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 39.77 52.62
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6021): 43.60 1.734 4.00 35.16
+ ID2= 2 (6022): 12.90 2.325 3.00 52.62
=====

ID = 3 (0125): 56.50 2.680 3.00 39.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0124): 55.10 2.327 3.50 37.79
+ ID2= 2 (0125): 56.50 2.680 3.00 39.14
=====

ID = 3 (0126): 111.60 4.886 3.00 38.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)

IN= 2--> OUT= 1 | Routing time step (min)= 5.00

<----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 / 0.0700 Main Channel
129.84 89.59 0.0700 Main Channel
130.34 90.09 0.0700 / 0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 4.89 3.00 38.48 0.71 0.25
OUTFLOW: ID= 1 (0603) 111.60 3.29 4.50 38.47 0.66 0.23

CALIB
NASHYD (6031)
ID= 1 DT= 5.0 min

Area (ha)= 19.00 Curve Number (CN)= 72.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.32

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 | 1.583 10.23 | 3.083 22.51 | 4.58 6.14
0.167 4.09 | 1.667 10.23 | 3.167 22.51 | 4.67 6.14
0.250 4.09 | 1.750 10.23 | 3.250 22.51 | 4.75 6.14
0.333 4.09 | 1.833 10.23 | 3.333 22.51 | 4.83 6.14
0.417 4.09 | 1.917 10.23 | 3.417 22.51 | 4.92 6.14
0.500 4.09 | 2.000 10.23 | 3.500 22.51 | 5.00 6.14
0.583 6.14 | 2.083 12.28 | 3.583 10.23 | 5.08 4.09
0.667 6.14 | 2.167 12.28 | 3.667 10.23 | 5.17 4.09
0.750 6.14 | 2.250 12.28 | 3.750 10.23 | 5.25 4.09
0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.771 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 45.555
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.448

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6032)
ID= 1 DT= 5.0 min

Area (ha)= 15.70
Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.40 11.30
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 | 1.583 10.23 | 3.083 22.51 | 4.58 6.14
0.167 4.09 | 1.667 10.23 | 3.167 22.51 | 4.67 6.14
0.250 4.09 | 1.750 10.23 | 3.250 22.51 | 4.75 6.14
0.333 4.09 | 1.833 10.23 | 3.333 22.51 | 4.83 6.14
0.417 4.09 | 1.917 10.23 | 3.417 22.51 | 4.92 6.14
0.500 4.09 | 2.000 10.23 | 3.500 22.51 | 5.00 6.14
0.583 6.14 | 2.083 12.28 | 3.583 10.23 | 5.08 4.09
0.667 6.14 | 2.167 12.28 | 3.667 10.23 | 5.17 4.09
0.750 6.14 | 2.250 12.28 | 3.750 10.23 | 5.25 4.09
0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 118.78
over (min) 5.00 15.00
Storage Coeff. (min)= 4.29 (ii) 12.40 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08
TOTALS
PEAK FLOW (cms)= 1.01 2.23 2.894 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 50.39 57.17
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.50 0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%

YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0127)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6031): 19.00 0.771 4.42 45.55
+ ID2= 2 (6032): 15.70 2.894 3.00 57.17
===== ID = 3 (0127): 34.70 2.997 3.00 50.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6101)
ID= 1 DT= 5.0 min

Area (ha)= 9.00 Curve Number (CN)= 70.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.23

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 | 1.583 10.23 | 3.083 22.51 | 4.58 6.14
0.167 4.09 | 1.667 10.23 | 3.167 22.51 | 4.67 6.14
0.250 4.09 | 1.750 10.23 | 3.250 22.51 | 4.75 6.14
0.333 4.09 | 1.833 10.23 | 3.333 22.51 | 4.83 6.14
0.417 4.09 | 1.917 10.23 | 3.417 22.51 | 4.92 6.14
0.500 4.09 | 2.000 10.23 | 3.500 22.51 | 5.00 6.14
0.583 6.14 | 2.083 12.28 | 3.583 10.23 | 5.08 4.09
0.667 6.14 | 2.167 12.28 | 3.667 10.23 | 5.17 4.09
0.750 6.14 | 2.250 12.28 | 3.750 10.23 | 5.25 4.09
0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |

1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Unit Hyd Qpeak (cms)= 0.279

PEAK FLOW (cms)= 0.365 (i)
TIME TO PEAK (hrs)= 4.333
RUNOFF VOLUME (mm)= 43.287
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.426

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min

Area (ha)= 12.10
Total Imp(%)= 27.00 Dir. Conn.(%)= 16.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.27 8.83
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 284.02 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 | 1.583 10.23 | 3.083 22.51 | 4.58 6.14
0.167 4.09 | 1.667 10.23 | 3.167 22.51 | 4.67 6.14
0.250 4.09 | 1.750 10.23 | 3.250 22.51 | 4.75 6.14
0.333 4.09 | 1.833 10.23 | 3.333 22.51 | 4.83 6.14
0.417 4.09 | 1.917 10.23 | 3.417 22.51 | 4.92 6.14
0.500 4.09 | 2.000 10.23 | 3.500 22.51 | 5.00 6.14
0.583 6.14 | 2.083 12.28 | 3.583 10.23 | 5.08 4.09
0.667 6.14 | 2.167 12.28 | 3.667 10.23 | 5.17 4.09
0.750 6.14 | 2.250 12.28 | 3.750 10.23 | 5.25 4.09
0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 109.05
over (min) 5.00 15.00
Storage Coeff. (min)= 3.96 (ii) 12.36 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 0.84 1.59 2.173 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 47.35 55.07
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.47 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6101): 9.00 0.365 4.33 43.29
+ ID2= 2 (6102): 12.10 2.173 3.00 55.07
===== ID = 3 (0136): 21.10 2.226 3.00 50.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0127): 34.70 2.997 3.00 50.81
+ ID2= 2 (0136): 21.10 2.226 3.00 50.05
===== ID = 3 (0128): 55.80 5.224 3.00 50.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)

3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0128): 55.80 5.224 3.00 50.52
+ ID2= 2 (0603): 111.60 3.287 4.50 38.47

ID = 1 (0128): 167.40 6.109 3.00 42.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700 Main Channel
166.55	83.78	0.0700 Main Channel
168.05	84.78	0.0700 / 0.1100 Main Channel
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 7.500
RUNOFF VOLUME (mm)= 54.387
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.535

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB |
STANDHYD (6042) | Area (ha)= 22.30
ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	14.49	7.81
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	385.57	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 165.04
over (min) 5.00 15.00

2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.40	6.11	3.00	42.49	2.45	0.08
OUTFLOW: ID= 1 (0604)	167.40	3.68	4.75	42.48	2.28	0.08

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB |
NASHYD (6041) | Area (ha)= 1.70 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 4.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Storage Coeff. (min)= 4.76 (ii) 11.87 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.09

PEAK FLOW (cms)= 5.01 2.24 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 6.959 (iii)
RUNOFF VOLUME (mm)= 95.62 62.70 3.00
TOTAL RAINFALL (mm)= 101.62 101.62 80.15
RUNOFF COEFFICIENT = 0.94 0.62 101.62 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6041): 1.70 0.032 7.50 54.39
+ ID2= 2 (6042): 22.30 6.959 3.00 80.15

ID = 3 (0129): 24.00 6.960 3.00 78.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0129): 24.00 6.960 3.00 78.32
+ ID2= 2 (0604): 167.40 3.678 4.75 42.48

ID = 3 (0130): 191.40 8.664 3.00 46.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100

3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 / 0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100
404.40	82.68	0.1100

Main Channel
Main Channel
Main Channel

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ---->				<-pipe / channel->			
AREA		QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)		(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0130)		191.40	8.66	3.00	46.97	1.19	0.31
OUTFLOW: ID= 1 (0605)		191.40	4.15	3.50	46.97	0.95	0.31

CALIB		Area (ha)=	0.60	Curve Number (CN)=	77.0
NASHYD (6111)		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)=	1.08		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.033 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 51.708
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.509

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)=	10.80	Dir. Conn.(%)=	50.00
STANDHYD (6112)		Total Imp(%)=	62.00		
ID= 1 DT= 5.0 min					

IMPERVIOUS PERVIOUS (i)

Surface Area	(ha)=	6.70	4.10
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	268.33	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)=	159.59	148.49
over (min)	5.00	15.00
Storage Coeff. (min)=	3.83 (ii)	11.25 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.25	0.09

TOTALS			
PEAK FLOW (cms)=	2.34	1.07	3.255 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	57.09	76.35
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.56	0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6111):		0.60	0.033	4.08	51.71
+ ID2= 2 (6112):		10.80	3.255	3.00	76.35
ID = 3 (0137):		11.40	3.261	3.00	75.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):		11.40	3.261	3.00	75.06
+ ID2= 2 (0605):		191.40	4.152	3.50	46.97
ID = 3 (0139):		202.80	6.076	3.00	48.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)=	0.40	Curve Number (CN)=	66.0
NASHYD (6051)		Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)=	1.31		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		

1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.014 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 39.039
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.384

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6052)	Area (ha)= 15.50
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.23	5.27
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	321.46	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09

1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 128.04
over (min) 5.00 15.00
Storage Coeff. (min)= 4.27 (ii) 12.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

PEAK FLOW (cms)= 3.59 1.13 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 4.539 (iii)
RUNOFF VOLUME (mm)= 95.62 47.00 73.53
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.47 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0051):	0.40	0.014	4.42	39.04	
+ ID2= 2 (0052):	15.50	4.539	3.00	73.53	
ID = 3 (0131):	15.90	4.541	3.00	72.66	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0131):	15.90	4.541	3.00	72.66	
+ ID2= 2 (0139):	202.80	6.076	3.00	48.55	
ID = 3 (0132):	218.70	10.617	3.00	50.30	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1

Routing time step (min)= 5.00

Distance	Elevation	Manning
0.00	81.70	0.1100
3.84	81.72	0.1100
5.87	80.72	0.1100
9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100
85.61	81.14	0.1100
93.32	80.00	0.1100
95.04	80.45	0.1100
102.72	80.66	0.1100
110.13	78.93	0.1100 / 0.0700 Main Channel
118.05	78.63	0.0700 Main Channel
124.40	78.89	0.0700 / 0.1100 Main Channel
132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.70	10.62	3.00	50.30	0.84	0.76
OUTFLOW: ID= 1 (0530)	218.70	8.36	3.08	50.30	0.76	0.73

CALIB	
STANDHYD (5302)	Area (ha)= 5.80
ID= 1 DT= 5.0 min	Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.48	2.32
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 120.33
over (min) 5.00 15.00
Storage Coeff. (min)= 3.18 (ii) 11.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.27 0.09

TOTALS

PEAK FLOW (cms)= 1.22 0.48 1.622 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00

RUNOFF VOLUME (mm)= 95.62 46.47 70.06

TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.46 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0530):	218.70	8.360	3.08	50.30
+ ID2= 2 (5302):	5.80	1.622	3.00	50.06
=====				
ID = 3 (0134):	224.50	9.277	3.00	50.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	273.90	15.396	3.17	51.40
+ ID2= 2 (0134):	224.50	9.277	3.00	50.81
=====				
ID = 3 (0135):	498.40	24.465	3.08	51.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)

IN= 2---> OUT= 1

Routing time step (min)= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning
0.00	79.36	0.0900
7.45	79.32	0.0900
13.77	79.27	0.0900

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<----- hydrograph ----->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.40	24.46	3.08	51.14	2.32	0.96
OUTFLOW: ID= 1 (0507)	498.40	21.16	3.33	51.14	2.18	0.92

CALIB

NASHYD (5071)

ID= 1 DT= 5.0 min

Area (ha)	Curve Number (CN)= 74.0
8.40	
Ia (mm)	# of Linear Res.(N)= 3.00
8.00	
U.H. Tp(hrs)	1.72

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.292 (i)

TIME TO PEAK (hrs)= 4.917

RUNOFF VOLUME (mm)= 47.930

TOTAL RAINFALL (mm)= 101.620

RUNOFF COEFFICIENT = 0.472

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

STANDHYD (5072)

ID= 1 DT= 5.0 min

Area (ha)	Total Imp(%)= 45.00	Dir. Conn.(%)= 30.00
40.50		
IMPERVIOUS	PERVIOUS (i)	
18.23	22.28	
Dep. Storage	6.00	8.00

Average Slope (%)= 1.00 1.00

Length (m)= 519.62 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 138.69

over (min)= 5.00 15.00

Storage Coeff. (min)= 5.70 (ii) 13.32 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 5.04 5.04 9.320 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00

RUNOFF VOLUME (mm)= 95.62 54.93 67.14

TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.54 0.66

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5071):	8.40	0.292	4.92	47.93
+ ID2= 2 (5072):	40.50	9.320	3.00	67.14
=====				
ID = 3 (0121):	48.90	9.346	3.00	63.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	48.90	9.346	3.00	63.84
+ ID2= 2 (0507):	498.40	21.159	3.33	51.14
=====				
ID = 3 (0122):	547.30	26.537	3.17	52.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min

AREA (ha)=	QPEAK (cms)=	TPEAK (hrs)=	R.V. (mm)=
253.60	0.78	15.58	47.57

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17

1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17

5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15

30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

STORE HYD(1605)		AREA	(ha)= 218.70
ID= 1 DT= 5.0min		QPEAK	(cms)= 1.37
		TPEAK	(hrs)= 71.92
		VOLUME	(mm)= 85.77

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24

2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28

7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25

15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15

19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13

23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.1		

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voain.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31fa71e94a\be95c9a8-21ad-4ac1-a17d-b66140ae2910\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31fa71e94a\be95c9a8-21ad-4ac1-a17d-b66140ae2910\
be95c9a8-21ad-4ac1-a17d-b66140ae2910\

DATE: 04-10-2024 TIME: 01:16:51

USER:

COMMENTS: _____

** SIMULATION : 10yrII6.stm **

READ STORM File: C:\Users\jannaormond\AppData\Local\Temp\ec528c0d-4c97-4ad9-80b7-e31bdfec4424\62f6350e
Ptotal= 67.60 mm Comments: Mount Hope-6 hour SCS Distribution Desig

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.70	1.50	6.76	3.00	14.87	4.50	4.06
0.17	2.70	1.67	6.76	3.17	14.87	4.67	4.06
0.33	2.70	1.83	6.76	3.33	14.87	4.83	4.06

0.50	4.06	2.00	8.11	3.50	6.76	5.00	2.70
0.67	4.06	2.17	8.11	3.67	6.76	5.17	2.70
0.83	4.06	2.33	8.11	3.83	6.76	5.33	2.70
1.00	4.06	2.50	40.56	4.00	5.41	5.50	2.70
1.17	4.06	2.67	73.01	4.17	5.41	5.67	2.70
1.33	4.06	2.83	105.46	4.33	5.41	5.83	2.70

CALIB
NASHYD (5011) Area (ha)= 80.20 Curve Number (CN)= 65.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.741 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 18.089
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.268

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012) Area (ha)= 39.40
ID= 1 DT= 5.0 min Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.97 24.43
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 44.47
over (min) 5.00 20.00
Storage Coeff. (min)= 6.67 (ii) 18.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

PEAK FLOW (cms)= 2.53 1.64 3.612 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 61.60 21.60 31.20
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.32 0.46

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	1.741	3.92	18.09
+ ID2= 2 (5012):	39.40	3.612	3.00	31.20
ID = 3 (0100):	119.60	3.973	3.00	22.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)

0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.489E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

		<--- hydrograph --->			<-pipe / channel->	
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0100)		119.60	3.97	3.00	22.41	1.06
OUTFLOW: ID= 1 (0502)		119.60	2.86	3.58	22.41	0.96
						0.87

CALIB		Area (ha)= 25.20		Curve Number (CN)= 62.0	
NASHYD (5021)		Ia (mm)= 8.00		# of Linear Res.(N)= 3.00	
ID= 1 DT= 5.0 min		U.H. Tp(hrs)= 1.46			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87
0.167	2.70	1.667	6.76	3.167	14.87
0.250	2.70	1.750	6.76	3.250	14.87
0.333	2.70	1.833	6.76	3.333	14.87
0.417	2.70	1.917	6.76	3.417	14.87
0.500	2.70	2.000	6.76	3.500	14.87
0.583	4.06	2.083	8.11	3.583	6.76
0.667	4.06	2.167	8.11	3.667	6.76
0.750	4.06	2.250	8.11	3.750	6.76

0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.662

PEAK FLOW	(cms)=	0.331 (i)
TIME TO PEAK	(hrs)=	4.667
RUNOFF VOLUME	(mm)=	16.500
TOTAL RAINFALL	(mm)=	67.600
RUNOFF COEFFICIENT	=	0.244

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (5022)	Area (ha)= 25.90	
ID= 1 DT= 5.0 min	Total Imp(%)= 42.00	Dir. Conn.(%)= 30.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	10.88	15.02
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	415.53	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87
0.167	2.70	1.667	6.76	3.167	14.87
0.250	2.70	1.750	6.76	3.250	14.87
0.333	2.70	1.833	6.76	3.333	14.87
0.417	2.70	1.917	6.76	3.417	14.87
0.500	2.70	2.000	6.76	3.500	14.87
0.583	4.06	2.083	8.11	3.583	6.76
0.667	4.06	2.167	8.11	3.667	6.76
0.750	4.06	2.250	8.11	3.750	6.76
0.833	4.06	2.333	8.11	3.833	6.76
0.917	4.06	2.417	8.11	3.917	6.76

1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	39.47
over (min)	5.00	20.00
Storage Coeff. (min)=	5.88 (ii)	18.48 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.19	0.06
TOTALS		
PEAK FLOW (cms)=	2.12	0.90
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	61.60	19.57
TOTAL RAINFALL (mm)=	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.29

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0101)		AREA		QPEAK		TPEAK		R.V.	
1 + 2 = 3		(ha)		(cms)		(hrs)		(mm)	
ID1= 1 (5021):		25.20		0.331		4.67		16.50	
+ ID2= 2 (5022):		25.90		2.709		3.00		32.18	
ID = 3 (0101):		51.10		2.737		3.00		24.45	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)		AREA		QPEAK		TPEAK		R.V.	
1 + 2 = 3		(ha)		(cms)		(hrs)		(mm)	
ID1= 1 (0101):		51.10		2.737		3.00		24.45	
+ ID2= 2 (0502):		119.60		2.858		3.58		22.41	
ID = 3 (0102):		170.70		4.356		3.00		23.02	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)		
IN= 2---> OUT= 1	Routing time step (min)'= 5.00	

<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 / 0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 / 0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93

3.69 87.90 .907E+05 223.4 0.92 6.77

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0102) 170.70 4.36 3.00 23.02 1.13 0.99
OUTFLOW: ID= 1 (0503) 170.70 4.02 3.33 23.02 1.09 0.96

CALIB
NASHYD (5031) | Area (ha)= 1.70 Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.82

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.046 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 21.745
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.322

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5032) | Area (ha)= 12.20
ID= 1 DT= 5.0 min | Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00

IMPERVIOUS (i)
Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 58.34
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.69 (ii) 15.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.07
TOTALS
PEAK FLOW (cms)= 1.61 0.48 1.944 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 26.62 43.06
TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.39 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5031): 1.70 0.046 3.83 21.75
+ ID2= 2 (5032): 12.20 1.944 3.00 43.06
===== ID = 3 (0103): 13.90 1.954 3.00 40.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104) |
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0103): 13.90 1.954 3.00 40.45
+ ID2= 2 (0503): 170.70 4.020 3.33 23.02
===== ID = 3 (0104): 184.60 5.376 3.00 24.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->
Distance Elevation Manning
19.10 82.03 0.0900
29.01 83.14 0.0900
40.83 82.56 0.0900
81.51 82.27 0.0900
122.18 82.68 0.0900
169.31 82.61 0.0900
217.10 82.90 0.0900
229.61 83.66 0.0900 / 0.0700 Main Channel
232.80 81.85 0.0700 Main Channel

243.24 83.87 0.0700 Main Channel
257.77 84.06 0.0900
312.01 83.52 0.0900
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900
513.93 82.96 0.0900
526.85 83.23 0.0900
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 81.96 .117E+02 0.0 0.18 23.95
0.23 82.08 .492E+02 0.1 0.28 15.67
0.34 82.19 .135E+03 0.2 0.34 13.00
0.45 82.30 .312E+03 0.4 0.32 13.44
0.57 82.42 .116E+04 1.2 0.28 15.74
0.68 82.53 .287E+04 3.5 0.32 13.85
0.79 82.64 .549E+04 7.0 0.33 13.13
0.91 82.76 .101E+05 14.9 0.39 11.28
1.02 82.87 .155E+05 27.5 0.47 9.38
1.13 82.98 .214E+05 45.2 0.55 7.89
1.25 83.10 .277E+05 67.2 0.64 6.87
1.36 83.21 .344E+05 93.6 0.71 6.12
1.47 83.32 .426E+05 125.3 0.77 5.67
1.59 83.44 .516E+05 162.2 0.82 5.30
1.70 83.55 .620E+05 204.2 0.86 5.06
1.81 83.66 .747E+05 254.0 0.89 4.90
1.95 83.80 .924E+05 324.9 0.92 4.74
2.08 83.93 .113E+06 411.3 0.95 4.59
2.21 84.06 .135E+06 515.5 1.00 4.37

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0104) 184.60 5.38 3.00 24.33 0.74 0.32
OUTFLOW: ID= 1 (0504) 184.60 4.51 3.50 24.33 0.71 0.32

CALIB
NASHYD (5041) | Area (ha)= 0.30 Curve Number (CN)= 68.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.89

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.007 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 19.823
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.293

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5042)	Area (ha)= 7.40
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	4.88		2.52			
Dep. Storage	(mm)=	6.00		8.00			
Average Slope	(%)=	1.00		1.00			
Length	(m)=	222.11		40.00			
Mannings n	=	0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.91
over (min) 5.00 15.00
Storage Coeff. (min)= 4.04 (ii) 14.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS
PEAK FLOW (cms)= 1.14 0.26 1.347 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.36 44.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (5041):	0.30	0.007	3.92
			R.V. (mm)
			19.82

+ ID2= 2 (5042): 7.40 1.347 3.00 44.93
=====

ID = 3 (0105): 7.70 1.348 3.00 43.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0105):	7.70	1.348	3.00
+ ID2= 2 (0504):	184.60	4.513	3.50
			R.V. (mm)
			43.95
ID = 3 (0106):	192.30	4.813	3.42
			25.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (5201)	Area (ha)= 22.80
ID= 1 DT= 5.0 min	Ia (mm)= 8.00
	U.H. Tp(hrs)= 1.31
	Curve Number (CN)= 72.0
	# of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.444 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 22.428
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.332

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5202)	Area (ha)= 6.90
ID= 1 DT= 5.0 min	Total Imp(%)= 23.00 Dir. Conn.(%)= 12.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	1.59		5.31			
Dep. Storage	(mm)=	6.00		8.00			
Average Slope	(%)=	1.00		1.00			
Length	(m)=	214.48		40.00			
Mannings n	=	0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.48
over (min) 5.00 20.00
Storage Coeff. (min)= 3.95 (ii) 15.56 (ii)

Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.07

PEAK FLOW (cms)= 0.24 0.42
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 61.60 24.98
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.37

TOTALS

0.524 (iii)
3.00
29.37
67.60
0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0111)
1 + 2 = 3

ID1= 1 (5201):
+ ID2= 2 (5202):
ID = 3 (0111):

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
22.80 0.444 4.50 22.43
6.90 0.524 3.00 29.37
29.70 0.597 3.25 24.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0521)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->

Distance Elevation Manning
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900 / 0.0700 Main Channel
513.93 82.96 0.0700 Main Channel
526.85 83.23 0.0700 / 0.0900 Main Channel
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)

0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.056 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 26.220
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.388

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min

Area (ha)= 13.80
Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.18 6.62
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70

0.05 83.00 .378E+02 0.0 0.11 83.81
0.09 83.05 .151E+03 0.0 0.17 52.79
0.14 83.09 .340E+03 0.1 0.22 40.29
0.18 83.14 .605E+03 0.3 0.27 33.26
0.23 83.18 .946E+03 0.5 0.32 28.66
0.27 83.23 .151E+04 0.9 0.33 27.77
0.32 83.27 .323E+04 1.8 0.31 29.51
0.37 83.32 .510E+04 3.2 0.34 26.44
0.42 83.37 .713E+04 5.0 0.38 23.61
0.46 83.42 .934E+04 7.3 0.42 21.44
0.51 83.47 .121E+05 10.0 0.45 20.23
0.56 83.52 .156E+05 13.4 0.47 19.44
0.61 83.57 .196E+05 17.7 0.49 18.52
0.66 83.61 .240E+05 22.8 0.52 17.49
0.71 83.66 .286E+05 28.4 0.54 16.75
0.75 83.71 .336E+05 34.7 0.56 16.14
0.80 83.76 .390E+05 41.8 0.58 15.55
0.85 83.81 .448E+05 49.8 0.60 14.99
0.90 83.86 .510E+05 58.8 0.63 14.46

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0111) 29.70 0.60 3.25 24.04 0.23 0.32
OUTFLOW: ID= 1 (0521) 29.70 0.52 4.50 24.03 0.22 0.31

CALIB
NASHYD (5211)
ID= 1 DT= 5.0 min

Area (ha)= 1.90 Curve Number (CN)= 77.0
Ia (mm)= 8.00 # of Linear Res. (N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70

1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 77.38
over (min) 5.00 15.00
Storage Coeff. (min)= 4.87 (ii) 14.49 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 1.54 0.78
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 30.73
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.45

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)
1 + 2 = 3

ID1= 1 (5211):
+ ID2= 2 (5212):
ID = 3 (0112):

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
1.90 0.056 4.00 26.22
13.80 2.189 3.00 43.08
15.70 2.199 3.00 41.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0113)
1 + 2 = 3

ID1= 1 (0112):
+ ID2= 2 (0521):
ID = 3 (0113):

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
15.70 2.199 3.00 41.04
29.70 0.517 4.50 24.03
45.40 2.371 3.00 29.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	192.30	4.813	3.42	25.12
+ ID2= 2 (0113):	45.40	2.371	3.00	29.91
=====				
ID = 3 (0114):	237.70	6.667	3.00	26.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)	
IN= 2---- OUT= 1	
Routing time step (min)= 5.00	

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 / 0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26

1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.039 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 19.829
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.293

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5052)	
ID= 1 DT= 5.0 min	
Area (ha)=	14.60
Total Imp(%)=	66.00
Dir. Conn.(%)=	54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	9.64	4.96
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	311.98	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70

0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ----> <-pipe / channel-->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.70	6.67	3.00	26.03	0.58	0.46
OUTFLOW: ID= 1 (0505)	237.70	6.12	3.08	26.03	0.55	0.44

CALIB	
NASHYD (5051)	
ID= 1 DT= 5.0 min	
Area (ha)=	1.30
Ia (mm)=	8.00
U.H. Tp(hrs)=	0.62
Curve Number (CN)=	68.0
# of Linear Res.(N)=	3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70

1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.91
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.95 (ii) 15.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.07

PEAK FLOW (cms)= 2.20 0.47 2.526 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.36 44.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5051):	1.30	0.039	3.58	19.83
+ ID2= 2 (5052):	14.60	2.526	3.00	44.93
=====				
ID = 3 (0107):	15.90	2.538	3.00	42.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0107):	15.90	2.538	3.00	42.88
+ ID2= 2 (0505):	237.70	6.121	3.08	26.03
=====				
ID = 3 (0108):	253.60	7.885	3.00	27.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)	

| IN= 2---> OUT= 1 | Routing time step (min)=' 5.00

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900
45.97	80.05	0.0900
65.23	79.93	0.0900
84.49	80.35	0.0900
113.49	80.02	0.0900
136.48	80.07	0.0900
188.81	79.81	0.0900
197.86	79.25	0.0900 / 0.0700
200.70	78.22	0.0700
203.29	79.35	0.0700 / 0.0900
204.01	79.67	0.0900
236.47	80.40	0.0900
277.80	80.48	0.0900
305.35	80.37	0.0900
346.67	80.41	0.0900
387.99	80.33	0.0900
415.54	80.53	0.0900
447.88	80.49	0.0900

Main Channel
Main Channel
Main Channel

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

| CALIB
| STANDHYD (5062) | Area (ha)= 7.80
| ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.07	2.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	228.04	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 73.65
over (min) 5.00 15.00
Storage Coeff. (min)= 4.10 (ii) 13.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)=	1.18	0.31	1.430 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	61.60	27.36	45.50
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.40	0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.60	7.89	3.00	27.09	1.45	1.21
OUTFLOW: ID= 1 (0506)	253.60	7.51	3.08	27.09	1.42	1.20

| CALIB
| NASHYD (5061) | Area (ha)= 3.90 Curve Number (CN)= 71.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 0.62

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.129 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 21.745
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.322

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0109) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
ID1= 1 (0061): 3.90 0.129 3.58 21.75
+ ID2= 2 (0062): 7.80 1.430 3.00 45.50
=====

ID = 3 (0109): 11.70 1.472 3.00 37.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0110) |
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
ID1= 1 (0109): 11.70 1.472 3.00 37.58
+ ID2= 2 (0506): 253.60 7.512 3.08 27.09
=====

ID = 3 (0110): 265.30 8.352 3.08 27.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (5101) | Area (ha)= 0.80 Curve Number (CN)= 66.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
| U.H. Tp(hrs)= 1.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70

0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 18.648
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.276

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5102)	
ID= 1 DT= 5.0 min	

Area (ha)= 0.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	0.45
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	77.46	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70

0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 50.94
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.15 (ii) 13.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.09 0.04 0.126 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 23.29 36.69
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.34 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5101):	0.80	0.012	4.58	18.65
+ ID2= 2 (5102):	0.90	0.126	3.00	36.69
=====				
ID = 3 (0115):	1.70	0.127	3.00	28.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->		
Distance	Elevation	Manning
0.00	81.24	0.1100

33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 / 0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 / 0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ---->		<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0115)	1.70	0.13	3.00
OUTFLOW: ID= 1 (0511)	1.70	0.09	3.08

CALIB	
NASHYD (5111)	
ID= 1 DT= 5.0 min	

Area (ha)= 1.90 Curve Number (CN)= 67.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.56

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 58.91
over (min) 5.00 15.00
Storage Coeff. (min)= 2.28 (ii) 13.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS

PEAK FLOW (cms)= 0.11 0.06 0.162 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 26.73 38.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40 0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5111):	1.90	0.059	3.50	19.23
+ ID2= 2 (5112):	1.10	0.162	3.00	38.93

ID = 3 (0116): 3.00 0.184 3.00 26.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0116):	3.00	0.184	3.00	26.45
+ ID2= 2 (0511):	1.70	0.092	3.08	28.20
ID = 3 (0117):	4.70	0.274	3.00	27.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)	Routing time step (min)'
IN= 2----> OUT= 1	5.00

----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning
0.00	80.80	0.0900
9.73	80.46	0.0900
14.10	82.04	0.0900
17.18	82.28	0.0900
41.13	82.12	0.0900 /0.0700
46.88	79.71	0.0700
51.41	80.90	0.0700 /0.0900
94.29	80.56	0.0900
175.64	80.72	0.0900
192.09	80.85	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63

2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0117)	4.70	0.27	3.00	27.08	0.50
OUTFLOW: ID= 1 (0512)	4.70	0.16	3.33	27.08	0.41

CALIB	Area (ha)	Curve Number (CN)= 71.0
NASHYD (5121)	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 1.14	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 4.250

RUNOFF VOLUME (mm)= 21.742
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.322

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)	Dir. Conn.(%)
STANDHYD (5122)	Total Imp(%)= 60.00	47.00
ID= 1 DT= 5.0 min		

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.92
Dep. Storage (mm)=	6.00
Average Slope (%)=	1.00
Length (m)=	146.06
Mannings n =	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 72.02
over (min) 5.00 15.00
Storage Coeff. (min)= 3.14 (ii) 13.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

TOTALS

PEAK FLOW (cms)= 0.43 0.15 0.555 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.10 43.31
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5121):	0.70	0.015	4.25	21.74	
+ ID2= 2 (5122):	3.20	0.555	3.00	43.31	
=====					
ID = 3 (0118):	3.90	0.557	3.00	39.44	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0118):	3.90	0.557	3.00	39.44	
+ ID2= 2 (0512):	4.70	0.160	3.33	27.08	
=====					
ID = 3 (0119):	8.60	0.674	3.00	32.68	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.30	8.352	3.08	27.55	
+ ID2= 2 (0119):	8.60	0.674	3.00	32.68	
=====					
ID = 3 (0120):	273.90	8.783	3.08	27.71	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr	
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Max.Eff.Inten.(mm/hr)= 105.46 37.03
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.55 (ii) 17.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06

PEAK FLOW (cms)= 0.50 0.45 0.795 (iii)	
TIME TO PEAK (hrs)= 3.00 3.17 3.00	
RUNOFF VOLUME (mm)= 61.60 19.00 25.82	
TOTAL RAINFALL (mm)= 67.60 67.60 67.60	
RUNOFF COEFFICIENT = 0.91 0.28 0.38	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

CALIB		Area (ha)= 44.10	Curve Number (CN)= 62.0
NASHYD (6011)		Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)= 0.83	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06	
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06	
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06	
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06	
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06	
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06	
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70	
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70	
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70	
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70	
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70	
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70	
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70	
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70	
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70	
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70	
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70	
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70	

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.881 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 11.00	Dir. Conn.(%)= 16.00
STANDHYD (6012)		Total Imp(%)= 28.00	
ID= 1 DT= 5.0 min			

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	3.08	7.92	

- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	0.881	3.83	16.50	
+ ID2= 2 (6012):	11.00	0.795	3.00	25.82	
=====					
ID = 3 (0124):	55.10	1.120	3.50	18.36	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)= 43.60	Curve Number (CN)= 62.0
NASHYD (6021)		Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min		U.H. Tp(hrs)= 0.95	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06	
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06	
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06	
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06	
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06	
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06	
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70	
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70	
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70	
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70	
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70	
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70	
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70	
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70	
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70	
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70	
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70	
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70	

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.789 (i)
TIME TO PEAK (hrs)= 4.000

RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min

Area (ha)= 12.90
Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 38.11
over (min) 5.00 20.00
Storage Coeff. (min)= 4.77 (ii) 17.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS

PEAK FLOW (cms)= 0.83 0.49 1.157 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 19.26 28.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.28 0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6021):	43.60	0.789	4.00	16.50
+ ID2= 2 (6022):	12.90	1.157	3.00	28.99
ID = 3 (0125):	56.50	1.292	3.00	19.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	1.120	3.50	18.36
+ ID2= 2 (0125):	56.50	1.292	3.00	19.35
ID = 3 (0126):	111.60	2.273	3.00	18.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2---> OUT= 1 Routing time step (min)= 5.00

----- DATA FOR SECTION (2135.9) -----

Distance	Elevation	Manning
0.00	92.58	0.1400
8.54	92.59	0.1400
22.11	92.47	0.1400
48.74	91.83	0.1400
67.59	91.58	0.1400

86.45	91.21	0.1400	
103.50	90.80	0.1400	
118.09	90.23	0.1400	
127.84	90.09	0.1400 / 0.0700	Main Channel
129.84	89.59	0.0700	Main Channel
130.34	90.09	0.0700 / 0.1400	Main Channel
140.57	90.14	0.1400	
161.87	90.11	0.1400	
177.03	90.04	0.1400	
188.67	89.87	0.1400	
199.59	90.31	0.1400	
212.02	90.96	0.1400	
225.58	91.35	0.1400	
252.71	91.66	0.1400	
274.11	91.86	0.1400	

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

hydrograph

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	2.27	3.00	18.86	0.60	0.22
OUTFLOW: ID= 1 (0603)	111.60	1.51	4.58	18.86	0.55	0.21

NASHYD (6031)
ID= 1 DT= 5.0 min

Area (ha)= 19.00
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.32

Curve Number (CN)= 72.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.369 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 22.428
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.332

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6032)
ID= 1 DT= 5.0 min

Area (ha)= 15.70
Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.40 11.30
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 51.33
over (min) 5.00 20.00
Storage Coeff. (min)= 5.06 (ii) 16.40 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS

PEAK FLOW (cms)= 0.66 0.93 1.290 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.60 31.00
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38 0.46

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0127)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6031):	19.00	0.369	4.50	22.43
+ ID2= 2 (6032):	15.70	1.290	3.00	31.00
=====				
ID = 3 (0127):	34.70	1.329	3.00	26.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6101)				
ID= 1 DT= 5.0 min				
	Area (ha)	Ia (mm)	Curve Number (CN)=	# of Linear Res.(N)=
	9.00	8.00	70.0	3.00
	U.H. Tp(hrs)= 1.23			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.279

PEAK FLOW (cms)= 0.173 (i)
TIME TO PEAK (hrs)= 4.333
RUNOFF VOLUME (mm)= 21.086
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.312

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6102)				
ID= 1 DT= 5.0 min				
	Area (ha)	Total Imp(%)=	Dir. Conn.(%)=	

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.27 8.83
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 284.02 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 46.13
over (min) 5.00 20.00
Storage Coeff. (min)= 4.68 (ii) 16.52 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS

PEAK FLOW (cms)= 0.54 0.65 0.982 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 23.69 29.76
TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.35 0.44

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6101):	9.00	0.173	4.33	21.09
+ ID2= 2 (6102):	12.10	0.982	3.00	29.76
=====				
ID = 3 (0136):	21.10	1.002	3.00	26.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0127):	34.70	1.329	3.00	26.31
+ ID2= 2 (0136):	21.10	1.002	3.00	26.06
=====				
ID = 3 (0128):	55.80	2.330	3.00	26.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0128):	55.80	2.330	3.00	26.21
+ ID2= 2 (0603):	111.60	1.507	4.58	18.86
=====				
ID = 1 (0128):	167.40	2.740	3.00	21.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0604)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 /0.0700 Main Channel
166.55	83.78	0.0700 Main Channel
168.05	84.78	0.0700 /0.1100 Main Channel
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.40	2.74	3.00	21.31	2.01	0.10
OUTFLOW: ID= 1 (0604)	167.40	1.78	5.00	21.30	1.84	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB						
NASHYD (6041)	Area (ha)=	1.70	Curve Number (CN)=	79.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	4.12				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.017 (i)
TIME TO PEAK (hrs)= 7.583
RUNOFF VOLUME (mm)= 27.939
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.413

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (6042)	Area (ha)=	22.30			
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	53.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	14.49	7.81
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	385.57	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46
over (min) 5.00
Storage Coeff. (min)= 5.62 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.20

PEAK FLOW (cms)=	3.25	1.10	4.162 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	
RUNOFF VOLUME (mm)=	61.60	33.95	48.60
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.50	0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6041):	1.70	0.017	7.58	27.94
+ ID2= 2 (6042):	22.30	4.162	3.00	48.60
ID = 3 (0129):	24.00	4.162	3.00	47.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0129):	24.00	4.162	3.00	47.14
+ ID2= 2 (0604):	167.40	1.776	5.00	21.30
ID = 3 (0130):	191.40	4.946	3.00	24.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)				
IN= 2--> OUT= 1				

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 /0.0700 Main Channel

258.15 80.95 0.0700 Main Channel
259.65 81.95 0.0700 /0.1100 Main Channel
263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ---->

<-pipe / channel->

INFLOW : ID= 2 (0130)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
OUTFLOW: ID= 1 (0605)	191.40	4.95	3.00	24.54	0.99	0.33
	191.40	2.11	3.58	24.54	0.84	0.27

CALIB	Area (ha)=	0.60	Curve Number (CN)=	77.0
NASHYD (6111)	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	1.08		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.016 (i)

TIME TO PEAK (hrs)= 4.167

RUNOFF VOLUME (mm)= 26.217

TOTAL RAINFALL (mm)= 67.600

RUNOFF COEFFICIENT = 0.388

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	10.80	Dir. Conn.(%)=	50.00
STANDHYD (6112)	Total Imp(%)=	62.00		
ID= 1 DT= 5.0 min				

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	6.70	4.10
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	268.33	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	79.47
over (min)	5.00	15.00
Storage Coeff. (min)=	4.52 (ii)	14.05 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.23	0.08

PEAK FLOW (cms)=	1.52	0.50	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	1.939 (iii)
RUNOFF VOLUME (mm)=	61.60	30.07	45.83
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT	0.91	0.44	0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6111):	0.60	0.016	4.17	26.22
+ ID2= 2 (6112):	10.80	1.939	3.00	45.83
ID = 3 (0137):	11.40	1.941	3.00	44.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):	11.40	1.941	3.00	44.80
+ ID2= 2 (0605):	191.40	2.111	3.58	24.54
ID = 3 (0139):	202.80	3.402	3.00	25.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	0.40	Curve Number (CN)=	66.0
NASHYD (6051)	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	1.31		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.006 (i)

TIME TO PEAK (hrs)= 4.500

RUNOFF VOLUME (mm)= 18.645
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.276

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min

Area (ha)= 15.50
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.23 5.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 54.69
over (min) 5.00 20.00
Storage Coeff. (min)= 5.04 (ii) 16.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS

PEAK FLOW (cms)= 2.33 0.47 2.651 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 24.02 44.31
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.36 0.66

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0051):	0.40	0.006	4.50	18.64
+ ID2= 2 (0052):	15.50	2.651	3.00	44.31
=====				
ID = 3 (0131):	15.90	2.652	3.00	43.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0131):	15.90	2.652	3.00	43.67
+ ID2= 2 (0139):	202.80	3.402	3.00	25.68
=====				
ID = 3 (0132):	218.70	6.054	3.00	26.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) ----->

Distance	Elevation	Manning
0.00	81.70	0.1100
3.84	81.72	0.1100
5.87	80.72	0.1100
9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100

85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 / 0.0700	Main Channel
118.05	78.69	0.0700	Main Channel
124.40	78.89	0.0700 / 0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

----- hydrograph -----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0132)	218.70	6.05	3.00	26.99	0.66	0.68
OUTFLOW: ID= 1 (0530)	218.70	4.70	3.08	26.99	0.59	0.65

ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.48 2.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 50.94
over (min) 5.00 20.00
Storage Coeff. (min)= 3.75 (ii) 15.13 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.25 0.07

TOTALS

PEAK FLOW (cms)= 0.80 0.20 0.931 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 23.29 41.68
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.34 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0530):	218.70	4.704	3.08	26.99
+ ID2= 2 (5302):	5.80	0.931	3.00	41.68
=====				
ID = 3 (0134):	224.50	5.214	3.00	27.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	273.90	8.783	3.08	27.71
+ ID2= 2 (0134):	224.50	5.214	3.00	27.37
=====				
ID = 3 (0135):	498.40	13.955	3.08	27.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	
IN= 2---- OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.142 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 23.865
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.353

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5072)	Area (ha)= 40.50
ID= 1 DT= 5.0 min	Total Imp(%)= 45.00 Dir. Conn.(%)= 30.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.23	22.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	519.62	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06

89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.40	13.96	3.08	27.56	1.84	0.84
OUTFLOW: ID= 1 (0507)	498.40	11.21	3.33	27.55	1.68	0.79

CALIB	
NASHYD (5071)	Area (ha)= 8.40 Curve Number (CN)= 74.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.72

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 73.24
over (min)= 5.00 20.00
Storage Coeff. (min)= 6.72 (ii) 16.56 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06
TOTALS
PEAK FLOW (cms)= 3.24 2.22 4.780 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 28.60 38.50
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.42 0.57

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5071):	8.40	0.142	5.00	23.86
+ ID2= 2 (5072):	40.50	4.780	3.00	38.50
=====				
ID = 3 (0121):	48.90	4.790	3.00	35.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0122) |
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	48.90	4.790	3.00	35.99
+ ID2= 2 (0507):	498.40	11.212	3.33	27.55

ID = 3 (0122):	547.30	14.136	3.25	28.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| STORE HYD(1505) |
ID= 1 DT= 5.0min

AREA	(ha)=	253.60
QPEAK	(cms)=	0.78
TPEAK	(hrs)=	15.58
VOLUME	(mm)=	47.57

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17

2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16

6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.14
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.15
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15
10.67	0.00	42.00	0.26	73.33	0.62	104.67	0.16	136.00	0.15
10.75	0.00	42.08	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15

15.08	0.71	46.42	0.26	77.75	0.39	109.08	0.15	140.42	0.14
15.17	0.74	46.50	0.26	77.83	0.37	109.17	0.15	140.50	0.13
15.25	0.74	46.58	0.26	77.92	0.39	109.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12

19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11

23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10

16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14

20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12

24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voин.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\81d6ea6a-7e73-4b58-bdc9-67b74e8d5488\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\81d6ea6a-7e73-4b58-bdc9-67b74e8d5488\

DATE: 04-10-2024 TIME: 01:16:45

USER:

COMMENTS: _____

** SIMULATION : 25yrII6.stm **

READ STORM	Filename: C:\Users\jannaormond\AppData\Local\Temp\ec528c0d-4c97-4ad9-80b7-e31bdfec4424\e0d06e36
Ptotal= 81.60 mm	Comments: Mount Hope-6 hour SCS Distribution Desig

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	3.26	1.50	8.16	3.00	17.95	4.50	4.90
0.17	3.26	1.67	8.16	3.17	17.95	4.67	4.90
0.33	3.26	1.83	8.16	3.33	17.95	4.83	4.90
0.50	4.90	2.00	9.79	3.50	8.16	5.00	3.26
0.67	4.90	2.17	9.79	3.67	8.16	5.17	3.26
0.83	4.90	2.33	9.79	3.83	8.16	5.33	3.26
1.00	4.90	2.50	48.96	4.00	6.53	5.50	3.26
1.17	4.90	2.67	88.13	4.17	6.53	5.67	3.26
1.33	4.90	2.83	127.30	4.33	6.53	5.83	3.26

CALIB			
NASHYD (5011)	Area (ha)= 80.20	Curve Number (CN)= 65.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.85		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 2.505 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 25.750
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.316

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5012)	Area (ha)= 39.40		
ID= 1 DT= 5.0 min	Total Imp(%)= 38.00	Dir. Conn.(%)= 24.00	

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 14.97 24.43
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	73.75
over (min)	5.00	20.00
Storage Coeff. (min)=	6.18 (ii)	16.00 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.19	0.07

TOTALS

PEAK FLOW (cms)=	3.09	2.48
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	75.60	30.20
TOTAL RAINFALL (mm)=	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.37

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)				
1 + 2 = 3				

ID1= 1 (5011):	80.20	2.505	3.83	25.75
+ ID2= 2 (5012):	39.40	4.800	3.00	41.09

=====

ID = 3 (0100):	119.60	5.365	3.00	30.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)				
IN= 2----> OUT= 1				

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1537.5) ----->				
Distance	Elevation	Manning		
0.00	89.30	0.1100		
4.20	89.28	0.1100		
9.03	88.80	0.1100		
21.55	88.78	0.1100		
29.06	88.24	0.1100		
39.87	87.83	0.1100		
55.54	87.84	0.1100 / 0.0700	Main Channel	
57.54	86.84	0.0700	Main Channel	
59.04	86.84	0.0700	Main Channel	
61.04	87.84	0.0700 / 0.1100	Main Channel	
74.10	87.86	0.1100		
87.72	88.07	0.1100		
101.34	88.18	0.1100		
113.53	88.23	0.1100		
128.57	88.32	0.1100		
142.19	88.61	0.1100		
155.81	88.53	0.1100		
183.05	88.85	0.1100		
187.19	88.84	0.1100		
211.21	88.88	0.1100		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87

	1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
	1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.662

PEAK FLOW (cms)= 0.477 (i)

TIME TO PEAK (hrs)= 4.667

RUNOFF VOLUME (mm)= 23.626

TOTAL RAINFALL (mm)= 81.600

RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area	(ha)=	25.90	
STANDHYD (5022)		Total Imp	(%)=	42.00	Dir. Conn.(%)= 30.00
ID= 1 DT= 5.0 min					
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	10.88		15.02	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	415.53		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYPOTHEGON ---							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	8.16	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 / 0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 / 0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

ADD HYD (0102)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0101):	51.10	3.548	3.00	32.92
ID2= 2 (0502):	119.60	3.820	3.83	30.80
=====				
ID = 3 (0102):	170.70	5.539	3.00	31.44

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-----
| ROUTE CHN( 0503)|
| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00
-----
<----- DATA FOR SECTION (1157.9) ----->

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			<---- hydrograph ---->			<-pipe / channel->	
	AREA		QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)		(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW: ID= 2 (0102)	170.70		5.54	3.00	31.44	1.25	1.08
OUTFLOW: ID= 1 (0503)	170.70		5.15	3.33	31.44	1.22	1.06

CALIB
NASHYD (5031)
ID= 1 DT= 5.0 min

Area (ha)= 1.70
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.82

Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.065 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 30.543
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 12.20
Total Imp(%)= 59.00
Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 94.01
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.35 (ii) 13.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 1.96 0.75
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 36.53
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.45

TOTALS
2.582 (iii)
3.00
54.89
81.60
0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)
1 + 2 = 3

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (05031):	1.70	0.065	3.83
+ ID2= 2 (05032):	12.20	2.582	3.00
=====			
ID = 3 (0103):	13.90	2.598	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)
1 + 2 = 3

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0103):	13.90	2.598	3.00
+ ID2= 2 (0503):	170.70	5.155	3.33
=====			
ID = 3 (0104):	184.60	7.120	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2--> OUT= 1

Routing time step (min)= 5.00

----- DATA FOR SECTION (815.4) -----

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900
217.10	82.90	0.0900
229.61	83.66	0.0900 / 0.0700
232.80	81.85	0.0700
243.24	83.87	0.0700
257.77	84.06	0.0900
312.01	83.52	0.0900
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900
513.93	82.96	0.0900

526.85 83.23 0.0900
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

----- hydrograph -----

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0104)	184.60	7.12	3.00	32.98	0.80
OUTFLOW: ID= 1 (0504)	184.60	5.80	3.42	32.98	0.76

CALIB
NASHYD (5041)
ID= 1 DT= 5.0 min

Area (ha)= 0.30
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.89

Curve Number (CN)= 68.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90

0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.010 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 28.042
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.344

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min
Area (ha)= 7.40
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.88 2.52
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 222.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90

0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 93.86
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.74 (ii) 12.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

PEAK FLOW (cms)= 1.38 0.38
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 34.92
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43

TOTALS

1.699 (iii)
3.00
56.89
81.60
0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5041): 0.30 0.010 3.92 28.04
+ ID2= 2 (5042): 7.40 1.699 3.00 56.89
=====

ID = 3 (0105): 7.70 1.702 3.00 55.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0105): 7.70 1.702 3.00 55.76
+ ID2= 2 (0504): 184.60 5.799 3.42 32.98
=====

ID = 3 (0106): 192.30 6.202 3.33 33.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5201)
ID= 1 DT= 5.0 min
Area (ha)= 22.80 Curve Number (CN)= 72.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.31

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.628 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 31.425
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.385

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min
Area (ha)= 6.90
Total Imp(%)= 23.00 Dir. Conn.(%)= 12.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.59 5.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 214.48 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 79.10
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.67 (ii) 13.21 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

PEAK FLOW (cms)= 0.29 0.66
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 34.56
TOTAL RAINFALL (mm)= 81.60 81.60

TOTALS

0.837 (iii)
3.00
39.48
81.60

RUNOFF COEFFICIENT = 0.93 0.42 0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0111)
1 + 2 = 3
ID1= 1 (5201): 22.80 0.628 4.42 31.42
+ ID2= 2 (5202): 6.90 0.837 3.00 39.48
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0521)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->
Distance Elevation Manning
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900 /0.0700 Main Channel
513.93 82.96 0.0700 Main Channel
526.85 83.23 0.0700 /0.0900 Main Channel
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 83.00 .378E+02 0.0 0.11 83.81
0.09 83.05 .151E+03 0.0 0.17 52.79
0.14 83.09 .340E+03 0.1 0.22 40.29
0.18 83.14 .605E+03 0.3 0.27 33.26
0.23 83.18 .946E+03 0.5 0.32 28.66
0.27 83.23 .151E+04 0.9 0.33 27.77
0.32 83.27 .323E+04 1.8 0.31 29.51

1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.078 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 36.240
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.444

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min
Area (ha)= 13.80
Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.18 6.62
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

0.37 83.32 .510E+04 3.2 0.34 26.44
0.42 83.37 .713E+04 5.0 0.38 23.61
0.46 83.42 .934E+04 7.3 0.42 21.44
0.51 83.47 .121E+05 10.0 0.45 20.23
0.56 83.52 .156E+05 13.4 0.47 19.44
0.61 83.57 .196E+05 17.7 0.49 18.52
0.66 83.61 .240E+05 22.8 0.52 17.49
0.71 83.66 .286E+05 28.4 0.54 16.75
0.75 83.71 .336E+05 34.7 0.56 16.14
0.80 83.76 .390E+05 41.8 0.58 15.55
0.85 83.81 .448E+05 49.8 0.60 14.99
0.90 83.86 .510E+05 58.8 0.63 14.46

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0111) 29.70 0.91 3.00 33.30 0.27 0.33
OUTFLOW: ID= 1 (0521) 29.70 0.71 4.58 33.28 0.25 0.32

CALIB
NASHYD (5211) Area (ha)= 1.90 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26

Max.Eff.Inten.(mm/hr)= 127.30 103.56
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.51 (ii) 13.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08
TOTALS
PEAK FLOW (cms)= 1.88 1.11 2.816 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 41.61 55.21
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)
1 + 2 = 3
ID1= 1 (5211): 1.90 0.078 4.00 36.24
+ ID2= 2 (5212): 13.80 2.816 3.00 55.21
=====

ID = 3 (0112): 15.70 2.832 3.00 52.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0113)
1 + 2 = 3
ID1= 1 (0112): 15.70 2.832 3.00 52.91
+ ID2= 2 (0521): 29.70 0.709 4.58 33.28
=====

ID = 3 (0113): 45.40 3.127 3.00 40.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3
AREA QPEAK TPEAK R.V.

(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 192.30 6.202 3.33 33.89
+ ID2= 2 (0113): 45.40 3.127 3.00 40.07

ID = 3 (0114): 237.70 8.852 3.00 35.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0505)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100
69.13 79.02 0.1100
92.42 79.04 0.1100
98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 /0.0700 Main Channel
336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 /0.0900 Main Channel
394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70
0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74

PEAK FLOW (cms)= 0.056 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 28.047
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.344

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (5052)| Area (ha)= 14.60
| ID= 1 DT= 5.0 min | Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 9.64 4.96
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 311.98 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 93.86
over (min) 5.00 15.00
Storage Coeff. (min)= 4.59 (ii) 13.50 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.70 8.85 3.00 35.07 0.69 0.51
OUTFLOW: ID= 1 (0505) 237.70 8.26 3.08 35.07 0.66 0.49

| CALIB
| NASHYD (5051)| Area (ha)= 1.30 Curve Number (CN)= 68.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Unit Hyd Qpeak (cms)= 0.080

Unit Hyd. peak (cms)= 0.23 0.08
TOTALS
PEAK FLOW (cms)= 2.68 0.73 3.288 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.92 56.89
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0107)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5051): 1.30 0.056 3.58 28.05
+ ID2= 2 (5052): 14.60 3.288 3.00 56.89

ID = 3 (0107): 15.90 3.307 3.00 54.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0108)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0107): 15.90 3.307 3.00 54.53
+ ID2= 2 (0505): 237.70 8.257 3.08 35.07

ID = 3 (0108): 253.60 10.593 3.00 36.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0506)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900

45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 / 0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 / 0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<----- hydrograph ----->					
<-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.60	10.59	3.00	36.29	1.59
OUTFLOW: ID= 1 (0506)	253.60	9.88	3.08	36.29	1.56

CALIB					
NASHYD (5061)	Area	(ha)=	3.90	Curve Number	(CN)= 71.0
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		0.62		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90	0.167	3.26	1.667	8.16
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90	0.250	3.26	1.750	8.16
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90	0.333	3.26	1.833	8.16
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90	0.417	3.26	1.917	8.16
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90	0.500	3.26	2.000	8.16
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90	0.583	4.90	2.083	9.79
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26	0.667	4.90	2.167	9.79
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26	0.750	4.90	2.250	9.79
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26	0.833	4.90	2.333	9.79
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26	0.917	4.90	2.417	9.79
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26	1.000	4.90	2.500	9.79
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26	1.083	4.90	2.583	48.96
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26	1.167	4.90	2.667	48.96
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26	1.250	4.90	2.750	88.13
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26	1.333	4.90	2.833	88.13
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26	1.417	4.90	2.917	127.30
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26	1.500	4.90	3.000	127.30
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26				

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.183 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 30.544
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5062)	Area	(ha)=	7.80		
ID= 1 DT= 5.0 min	Total Imp(%)=		65.00	Dir. Conn.(%)=	53.00

IMPERVIOUS			
Surface Area	(ha)=	5.07	2.73
Dep. Storage	(mm)=	6.00	8.00

Average Slope (%)= 1.00
Length (m)= 228.04
Mannings n = 0.013

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90	0.167	3.26	1.667	8.16
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90	0.250	3.26	1.750	8.16
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90	0.333	3.26	1.833	8.16
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90	0.417	3.26	1.917	8.16
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90	0.500	3.26	2.000	8.16
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90	0.583	4.90	2.083	9.79
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26	0.667	4.90	2.167	9.79
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26	0.750	4.90	2.250	9.79
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26	0.833	4.90	2.333	9.79
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26	0.917	4.90	2.417	9.79
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26	1.000	4.90	2.500	9.79
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26	1.083	4.90	2.583	48.96
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26	1.167	4.90	2.667	48.96
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26	1.250	4.90	2.750	88.13
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26	1.333	4.90	2.833	88.13
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26	1.417	4.90	2.917	127.30
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26	1.500	4.90	3.000	127.30
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26				

Max.Eff.Inten.(mm/hr)= 127.30
over (min)= 5.00
Storage Coeff. (min)= 3.80 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.25

PEAK FLOW (cms)= 1.43
TIME TO PEAK (hrs)= 3.00
RUNOFF VOLUME (mm)= 75.60
TOTAL RAINFALL (mm)= 81.60
RUNOFF COEFFICIENT = 0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (5061):	3.90	0.183	3.58	30.54	
+ ID2= 2 (0506):	7.80	1.801	3.00	57.66	
=====					
ID = 3 (0109):	11.70	1.866	3.00	48.62	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0109):	11.70	1.866	3.00	48.62	
+ ID2= 2 (0506):	253.60	9.885	3.08	36.29	
=====					
ID = 3 (0110):	265.30	10.960	3.08	36.83	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB					
NASHYD (5101)	Area	(ha)=	0.80	Curve Number	(CN)= 66.0
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=		1.42		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90	0.167	3.26	1.667	8.16
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90	0.250	3.26	1.750	8.16
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90	0.333	3.26	1.833	8.16
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90	0.417	3.26	1.917	8.16
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90	0.500	3.26	2.000	8.16
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90	0.583	4.90	2.083	9.79
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26	0.667	4.90	2.167	9.79
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26	0.750	4.90	2.250	9.79
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26	0.833	4.90	2.333	9.79
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26	0.917	4.90	2.417	9.79
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26	1.000	4.90	2.500	9.79
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26	1.083	4.90	2.583	48.96
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26	1.167	4.90	2.667	48.96
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26				

1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.017 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 26.492
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.325

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5102)	Area (ha)= 0.90
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.45	0.45
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	77.46	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26

1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.58
over (min) 5.00 15.00
Storage Coeff. (min)= 1.99 (ii) 11.33 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

PEAK FLOW (cms)= 0.11 0.06 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.164 (iii)
RUNOFF VOLUME (mm)= 75.60 32.32 47.46
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.40 0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5101):	0.80	0.017	4.58	26.49
+ ID2= 2 (5102):	0.90	0.164	3.00	47.46
=====				
ID = 3 (0115):	1.70	0.166	3.00	37.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1 Routing time step (min)= 5.00

<----- DATA FOR SECTION (553.6) ----->				
Distance	Elevation	Manning		
0.00	81.24	0.1100		
33.01	80.98	0.1100		
49.97	81.27	0.1100		
54.18	80.35	0.1100		
60.88	81.23	0.1100 / 0.0700	Main Channel	
69.13	79.02	0.0700	Main Channel	
92.42	79.04	0.0700	Main Channel	
98.70	80.89	0.0700 / 0.1100	Main Channel	

128.88	81.13	0.1100
199.00	81.23	0.1100

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ---->						<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)	
INFLOW : ID= 2 (0115)	1.70	0.17	3.00	37.59	0.03	0.24	
OUTFLOW: ID= 1 (0511)	1.70	0.12	3.08	37.59	0.02	0.24	

CALIB	
NASHYD (5111)	Area (ha)= 1.90
ID= 1 DT= 5.0 min	Ia (mm)= 8.00
	U.H. Tp(hrs)= 0.56
	Curve Number (CN)= 67.0
	# of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90

0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.085 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 27.260
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.334

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5112)	Area (ha)= 1.10
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.55	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	85.63	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90

0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 94.85
over (min) 5.00 15.00
Storage Coeff. (min)= 2.11 (ii) 10.99 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

PEAK FLOW (cms)= 0.14 0.09 0.211 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 36.66 50.28
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.45 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5111):	1.90	0.085	3.50	27.26
+ ID2= 2 (5112):	1.10	0.211	3.00	50.28
ID = 3 (0116):	3.00	0.245	3.00	35.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0116):	3.00	0.245	3.00	35.70
+ ID2= 2 (0511):	1.70	0.120	3.08	37.59
ID = 3 (0117):	4.70	0.360	3.00	36.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

Distance	Elevation	Manning
0.00	80.80	0.0900
9.73	80.46	0.0900
14.10	82.04	0.0900
17.18	82.28	0.0900
41.13	82.12	0.0900 /0.0700
46.88	79.71	0.0700
51.41	80.90	0.0700 /0.0900
94.29	80.56	0.0900
175.64	80.72	0.0900
192.09	80.85	0.0900

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

hydrograph pipe / channel

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0117)	4.70	0.36	3.00	0.55	0.37
OUTFLOW: ID= 1 (0512)	4.70	0.22	3.33	0.46	0.32

CALIB				
NASHYD (5121)	Area	(ha)=	0.70	Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		1.14	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.021 (i)
TIME TO PEAK (hrs)= 4.250
RUNOFF VOLUME (mm)= 30.541
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (5122)	Area	(ha)=	3.20	
ID= 1 DT= 5.0 min	Total Imp(%)=	60.00	Dir. Conn.(%)=	47.00

Surface Area	(ha)=	1.92	IMPERVIOUS	PERVIOUS (i)
Dep. Storage	(mm)=	6.00		
Average Slope	(%)=	1.00		
Length	(m)=	146.06		
Mannings n	=	0.013		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 97.76
over (min) 5.00 15.00
Storage Coeff. (min)= 2.91 (ii) 11.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

PEAK FLOW (cms)= 0.53 0.21 0.703 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 37.11 55.20
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.45 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0121):	0.70	0.021	4.25	30.54
+ ID2= 2 (0122):	3.20	0.703	3.00	55.20
=====				
ID = 3 (0118):	3.90	0.706	3.00	50.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0118):	3.90	0.706	3.00	50.77
+ ID2= 2 (0512):	4.70	0.220	3.33	36.38
=====				
ID = 3 (0119):	8.60	0.870	3.00	42.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0110):	265.30	10.960	3.08	36.83
+ ID2= 2 (0119):	8.60	0.870	3.00	42.91
=====				
ID = 3 (0120):	273.90	11.531	3.08	37.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6011)	Area (ha)=	44.10	Curve Number (CN)=	62.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.83		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.276 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (6012)	Area (ha)=	11.00
ID= 1 DT= 5.0 min	Total Imp(%)=	28.00
	Dir. Conn.(%)=	16.00

IMPERVIOUS (i)		
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.80	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)=	127.30	52.38	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.22 (ii)	15.47 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.24	0.07	
			TOTALS
PEAK FLOW (cms)=	0.60	0.69	1.070 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	75.60	26.83	34.64
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.33	0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

(ha) (cms) (hrs) (mm)				
ID1= 1 (6011):	44.10	1.276	3.83	23.63
+ ID2= 2 (6012):	11.00	1.070	3.00	34.64
=====				
ID = 3 (0124):	55.10	1.597	3.50	25.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)	Area (ha)=	43.60	Curve Number (CN)=	62.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.141 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min

Area (ha)= 12.90
Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 53.84
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.42 (ii) 15.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.07

TOTALS
PEAK FLOW (cms)= 1.01 0.74 1.520 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 27.16 38.30
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.33 0.47

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0021):	43.60	1.141	4.00	23.63
+ ID2= 2 (0022):	12.90	1.520	3.00	38.30
=====				
ID = 3 (0125):	56.50	1.733	3.00	26.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	1.597	3.50	25.82
+ ID2= 2 (0125):	56.50	1.733	3.00	26.98
=====				
ID = 3 (0126):	111.60	3.093	3.00	26.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) -----

Distance	Elevation	Manning
0.00	92.58	0.1400
8.54	92.59	0.1400
22.11	92.47	0.1400
48.74	91.83	0.1400
67.59	91.58	0.1400
86.45	91.21	0.1400
103.50	90.80	0.1400
118.09	90.23	0.1400
127.84	90.09	0.1400 / 0.0700
129.84	89.59	0.0700
130.34	90.09	0.0700 / 0.1400
140.57	90.14	0.1400

161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

----- hydrograph -----<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	3.09	3.00	26.41	0.65	0.23
OUTFLOW: ID= 1 (0603)	111.60	2.16	4.58	26.40	0.59	0.22

CALIB
NASHYD (6031)
ID= 1 DT= 5.0 min

Area (ha)= 19.00 Curve Number (CN)= 72.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.32

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME RAIN	TIME RAIN	TIME RAIN	TIME RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90	
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90	
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90	
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90	
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90	
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90	
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26	
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26	
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26	
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26	
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26	
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26	
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26	
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26	
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26	
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26	
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26	
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26	

Max.Eff.Inten.(mm/hr)= 127.30 83.39
over (min) 5.00 15.00
Storage Coeff. (min)= 4.69 (ii) 14.04 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 0.80 1.45 2.002 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 35.32 41.36
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0127)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (6031):	19.00	0.522	4.42	31.42
+ ID2= 2 (6032):	15.70	2.002	3.00	41.36

=====

ID = 3 (0127): 34.70 2.064 3.00 35.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)	Curve Number (CN)
NASHYD (6101)	9.00	70.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.23	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.279

PEAK FLOW (cms)= 0.246 (i)
TIME TO PEAK (hrs)= 4.333
RUNOFF VOLUME (mm)= 29.689
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.364

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)
STANDHYD (6102)	12.10

|ID= 1 DT= 5.0 min | Total Imp(%)= 27.00 Dir. Conn.(%)= 16.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.27	8.83
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	284.02	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16		3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16		3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16		3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16		3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16		3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16		3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79		3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79		3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79		3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79		3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79		3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79		4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96		4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96		4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13		4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13		4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30		4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30		4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 75.81
over (min) 5.00 15.00
Storage Coeff. (min)= 4.34 (ii) 14.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

TOTALS
PEAK FLOW (cms)= 0.66 1.03 1.506 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 32.92 39.75
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.40 0.49

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (6101):	9.00	0.246	4.33	29.69
+ ID2= 2 (6102):	12.10	1.506	3.00	39.75
ID = 3 (0136):	21.10	1.538	3.00	35.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0127):	34.70	2.064	3.00	35.92
+ ID2= 2 (0136):	21.10	1.538	3.00	35.46
ID = 3 (0128):	55.80	3.601	3.00	35.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1				
ID1= 3 (0128):	55.80	3.601	3.00	35.75
+ ID2= 2 (0603):	111.60	2.157	4.58	26.40
ID = 1 (0128):	167.40	4.157	3.00	29.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)	Routing time step (min)= 5.00
IN= 2---> OUT= 1	

----- DATA FOR SECTION (1414.9) ----->
Distance Elevation Manning
0.00 86.75 0.0900

3.09	87.40	0.0900	
18.33	87.41	0.0900	
35.33	86.99	0.0900	
73.84	86.75	0.0900	
103.33	86.41	0.0900	
120.33	86.11	0.0900	
129.46	86.13	0.0900	
143.37	85.32	0.0900	
154.33	85.02	0.0900	
161.57	85.09	0.0900	
163.05	84.78	0.0900 / 0.0700	Main Channel
166.55	83.78	0.0700	Main Channel
168.05	84.78	0.0700 / 0.1100	Main Channel
172.02	85.29	0.1100	
191.39	86.19	0.1100	
270.18	85.78	0.1100	
296.33	86.36	0.1100	
324.34	86.68	0.1100	
368.56	87.05	0.1100	

----- TRAVEL TIME TABLE -----					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.40	4.16	3.00	2.24	0.09
OUTFLOW: ID= 1 (0604)	167.40	2.52	5.00	1.97	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB			
NASHYD (6041)	Area (ha)= 1.70	Curve Number (CN)= 79.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 4.12		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.023 (i)
TIME TO PEAK (hrs)= 7.500
RUNOFF VOLUME (mm)= 38.381
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.470

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6042)	Area (ha)= 22.30		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 53.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	14.49	7.81
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	385.57	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	120.63
over (min)	5.00	15.00
Storage Coeff. (min)=	5.21 (ii)	13.27 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.21	0.08

PEAK FLOW (cms)=	3.96	1.54	5.266 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	
RUNOFF VOLUME (mm)=	75.60	45.44	61.42
TOTAL RAINFALL (mm)=	81.60	81.60	
RUNOFF COEFFICIENT =	0.93	0.56	0.75

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)				
1 + 2 = 3				
ID1= 1 (6041):	1.70	0.023	7.50	38.38
+ ID2= 2 (6042):	22.30	5.266	3.00	61.42
ID = 3 (0129):	24.00	5.267	3.00	59.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)				
1 + 2 = 3				
ID1= 1 (0129):	24.00	5.267	3.00	59.79
+ ID2= 2 (0604):	167.40	2.519	5.00	29.51
ID = 3 (0130):	191.40	6.444	3.00	33.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)		
IN= 2----> OUT= 1	Routing time step (min)= 5.00	

----- DATA FOR SECTION (801.4) -----			
Distance	Elevation	Manning	
0.00	82.95	0.1100	
3.78	82.95	0.1100	
9.24	82.49	0.1100	
50.67	82.10	0.1100	
105.12	82.17	0.1100	
119.34	81.56	0.1100	
150.67	81.66	0.1100	
157.23	82.37	0.1100	
190.03	82.57	0.1100	
223.75	82.27	0.1100	
252.32	82.50	0.1100	
254.65	81.95	0.1100 / 0.0700	Main Channel
258.15	80.95	0.0700	Main Channel
259.65	81.95	0.0700 / 0.1100	Main Channel
263.15	82.90	0.1100	
278.14	82.80	0.1100	
282.35	81.68	0.1100	
285.02	82.19	0.1100	

	336.56	82.53	0.1100				
	404.40	82.68	0.1100				
<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.08	81.03	.125E+02	0.0	0.11	104.30		
0.17	81.12	.499E+02	0.0	0.18	65.70		
0.25	81.20	.112E+03	0.0	0.24	50.14		
0.33	81.28	.199E+03	0.1	0.29	41.39		
0.42	81.37	.312E+03	0.1	0.34	35.67		
0.50	81.45	.449E+03	0.2	0.38	31.59		
0.58	81.53	.611E+03	0.4	0.42	28.50		
0.67	81.62	.117E+04	0.5	0.33	36.11		
0.75	81.70	.316E+04	1.1	0.24	49.12		
0.83	81.78	.560E+04	2.1	0.27	45.15		
0.92	81.87	.827E+04	3.4	0.30	40.03		
1.00	81.95	.112E+05	5.2	0.33	35.88		
1.10	82.05	.151E+05	8.0	0.38	31.68		
1.21	82.16	.207E+05	8.8	0.30	39.37		
1.31	82.26	.306E+05	14.0	0.33	36.36		
1.41	82.36	.433E+05	20.3	0.34	35.59		
1.52	82.47	.606E+05	28.4	0.34	35.57		
1.62	82.57	.828E+05	41.0	0.36	33.68		
1.73	82.68	.109E+06	60.1	0.39	30.35		

<---- hydrograph ----> <-pipe / channel->							
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0130)	191.40	6.44	3.00	33.30	1.05	0.35	
OUTFLOW: ID= 1 (0605)	191.40	2.88	3.50	33.30	0.88	0.28	

CALIB							
NASHYD (6111)	Area (ha)=	0.60	Curve Number (CN)=	77.0			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	1.08					

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90

0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 36.237
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.444

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB							
STANDHYD (6112)	Area (ha)=	10.80					
ID= 1 DT= 5.0 min	Total Imp(%)=	62.00	Dir. Conn.(%)=	50.00			

Surface Area	(ha)=	6.70	IMPERVIOUS (i)				
Dep. Storage	(mm)=	6.00	PERVIOUS (i)				
Average Slope	(%)=	1.00					
Length	(m)=	268.33					
Mannings n	=	0.013					

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90

0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	106.59
over (min)	5.00	15.00
Storage Coeff. (min)=	4.19 (ii)	12.66 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.08

PEAK FLOW (cms)=	1.85	0.72	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	2.456 (iii)
RUNOFF VOLUME (mm)=	75.60	40.78	58.19
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.50	0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)							
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
ID1= 1 (6111):	0.60	0.022	4.08	36.24			
+ ID2= 2 (6112):	10.80	2.456	3.00	58.19			
ID = 3 (0137):	11.40	2.460	3.00	57.03			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)							

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
ID1= 1 (0137):	11.40	2.460	3.00	57.03			
+ ID2= 2 (0605):	191.40	2.885	3.50	33.30			
ID = 3 (0139):	202.80	4.471	3.00	34.64			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB							
NASHYD (6051)	Area (ha)=	0.40	Curve Number (CN)=	66.0			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	1.31					

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.009 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 26.488
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.325

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min

Area (ha)= 15.50
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 10.23 5.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 89.28
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.67 (ii) 13.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
TOTALS
PEAK FLOW (cms)= 2.84 0.73 3.443 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 33.23 56.11
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.41 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0051): 0.40 0.009 4.42 26.49
+ ID2= 2 (0052): 15.50 3.443 3.00 56.11
===== ID = 3 (0131): 15.90 3.445 3.00 55.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0131): 15.90 3.445 3.00 55.36
+ ID2= 2 (0139): 202.80 4.471 3.00 34.64
===== ID = 3 (0132): 218.70 7.916 3.00 36.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) ----->
Distance Elevation Manning
0.00 81.70 0.1100
3.84 81.72 0.1100
5.87 80.72 0.1100
9.38 81.42 0.1100
49.64 81.07 0.1100
80.61 80.72 0.1100
85.61 81.14 0.1100
93.32 80.00 0.1100
95.04 80.45 0.1100
102.72 80.66 0.1100
110.13 78.93 0.1100 /0.0700 Main Channel

118.05 78.63 0.0700 Main Channel
124.40 78.89 0.0700 /0.1100 Main Channel
132.18 79.61 0.1100
139.34 79.23 0.1100
144.67 79.43 0.1100
149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70
2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0132) 218.70 7.92 3.00 36.15 0.75 0.72
OUTFLOW: ID= 1 (0530) 218.70 6.18 3.08 36.14 0.66 0.68

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

Area (ha)= 5.80
Total Imp(%)= 60.00 Dir. Conn.(%)= 48.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 3.48 2.32
Dep. Storage (mm)= 6.00 8.00

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.70	6.182	3.08	36.14
+ ID2= 2 (5302):	5.80	1.223	3.00	53.09
=====				
ID = 3 (0134):	224.50	6.866	3.00	36.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	273.90	11.531	3.08	37.02
+ ID2= 2 (0134):	224.50	6.866	3.00	36.58
=====				
ID = 3 (0135):	498.40	18.359	3.08	36.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)		Routing time step (min)'= 5.00
IN= 2----> OUT= 1		

<----- DATA FOR SECTION (40.0) ----->			
Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.200 (i)
TIME TO PEAK (hrs)= 4.917
RUNOFF VOLUME (mm)= 33.264
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.408

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 40.50	Total Imp(%)= 45.00	Dir. Conn.(%)= 30.00
STANDHYD (5072)				
ID= 1 DT= 5.0 min				

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	18.23	22.28
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	519.62	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

		<---- hydrograph ---->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.40	18.36	3.08	36.83	2.06	0.90
OUTFLOW: ID= 1 (0507)	498.40	15.13	3.33	36.83	1.90	0.85

CALIB		Area (ha)= 8.40	Curve Number (CN)= 74.0
NASHYD (5071)			
ID= 1 DT= 5.0 min		Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)= 1.72	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90

0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 98.85
over (min)= 5.00 15.00
Storage Coeff. (min)= 6.23 (ii) 14.96 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08

TOTALS
PEAK FLOW (cms)= 3.97 3.34 6.746 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 39.00 49.98
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.48 0.61

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5071):	8.40	0.200	4.92	33.26
+ ID2= 2 (5072):	40.50	6.746	3.00	49.98
=====				
ID = 3 (0121):	48.90	6.761	3.00	47.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	48.90	6.761	3.00	47.11

+ ID2= 2 (0507): 498.40 15.132 3.33 36.83

=====

ID = 3 (0122): 547.30 19.169 3.17 37.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min

AREA (ha)= 253.60
QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 47.57

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24

3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18

7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.15
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.14
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15
10.67	0.00	42.00	0.26	73.33	0.62	104.67	0.16	136.00	0.15
10.75	0.00	42.08	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15
10.92	0.00	42.25	0.26	73.58	0.60	104.92	0.16	136.25	0.15
11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15
11.17	0.00	42.50	0.26	73.83	0.59	105.17	0.16	136.50	0.15
11.25	0.00	42.58	0.26	73.92	0.57	105.25	0.16	136.58	0.15

15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12

19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11

23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.11
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.10

16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14

20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12

25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.1		

835a5713-6709-4f67-9310-4f0baf9b2882\
Summary filename:
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835a5713-6709-4f67-9310-4f0baf9b2882\

DATE: 04-10-2024 TIME: 01:16:47

USER:

COMMENTS: _____

** SIMULATION : 2yrIIG.stm **

READ STORM Filename: C:\Users\jannaormond\AppData
 ata\Local\Temp\
 ec528c0d-4c97-4ad9-80b7-e31bdfec4424\60beaa3
Ptotal= 40.03 mm Comments: Mount Hope-6 hour SCS Distribution Desig

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.00	1.59	1.50	3.97	3.00	8.73	4.50	2.38	
0.17	1.59	1.67	3.97	3.17	8.73	4.67	3.38	
0.33	1.59	1.83	3.97	3.33	8.73	4.83	3.38	
0.50	2.38	2.00	4.76	3.50	3.97	5.00	1.59	
0.67	2.38	2.17	4.76	3.67	3.97	5.17	1.59	
0.83	2.38	2.33	4.76	3.83	3.97	5.33	1.59	
1.00	2.38	2.50	23.82	4.00	3.18	5.50	1.59	
1.17	2.38	2.67	42.88	4.17	3.18	5.67	1.59	
1.33	2.38	2.83	61.93	4.33	3.18	5.83	1.59	

CALIB
NASHYD (5011) Area (ha)= 80.20 Curve Number (CN)= 65.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
1.583	3.97	3.083	8.73	4.58	2.38		
1.667	3.97	3.167	8.73	4.67	2.38		
1.750	3.97	3.250	8.73	4.75	3.38		
1.833	3.97	3.333	8.73	4.83	3.38		
1.917	3.97	3.417	8.73	4.92	3.38		
2.000	3.97	3.500	8.73	5.00	3.38		
2.083	4.76	3.583	3.97	5.08	1.59		
2.167	4.76	3.667	3.97	5.17	1.59		
2.250	4.76	3.750	3.97	5.25	1.59		
2.333	4.76	3.833	3.97	5.33	1.59		
2.417	4.76	3.917	3.97	5.42	1.59		
2.500	4.76	4.000	3.97	5.50	1.59		
2.583	23.82	4.083	3.18	5.58	1.59		
2.667	23.82	4.167	3.18	5.67	1.59		
2.750	42.88	4.250	3.18	5.75	1.59		
2.833	42.88	4.333	3.18	5.83	1.59		
2.917	61.93	4.417	3.18	5.92	1.59		
3.000	61.93	4.500	3.18	6.00	1.59		

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 0.550 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 6.078
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.152

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012) Area (ha)= 39.40
ID= 1 DT= 5.0 min Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.97 24.43
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Max.Eff.Inten.(mm/hr)= 61.93 13.05
over (min) 10.00 30.00
Storage Coeff. (min)= 8.25 (ii) 27.87 (ii)
Unit Hyd. Tpeak (min)= 10.00 30.00
Unit Hyd. peak (cms)= 0.13 0.04

PEAK FLOW (cms)= 1.32 0.43 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.42 1.476 (iii)
RUNOFF VOLUME (mm)= 34.03 7.74 3.00
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.19 0.35

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
ID1= 1 (5011): 80.20 0.550 3.92 6.08
+ ID2= 2 (5012): 39.40 1.476 3.00 14.05
=====

ID = 3 (0100): 119.60 1.576 3.08 8.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2 ---> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.494E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65

1.90 88.74 .101E+06 54.6 0.64 30.77
2.02 88.86 .124E+06 64.7 0.62 31.85

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 119.60 1.58 3.08 8.70 0.72 0.75
OUTFLOW: ID= 1 (0502) 119.60 1.01 3.67 8.70 0.57 0.66

CALIB
NASHYD (5021)
ID= 1 DT= 5.0 min
Area (ha)= 25.20 Curve Number (CN)= 62.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.46

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 9.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 9.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 9.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 9.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 9.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 9.97 5.50 1.59
1.083 2.38 2.583 4.76 4.083 9.97 5.58 1.59
1.167 2.38 2.667 4.76 4.167 9.97 5.67 1.59
1.250 2.38 2.750 4.76 4.250 9.97 5.75 1.59
1.333 2.38 2.833 4.76 4.333 9.97 5.83 1.59
1.417 2.38 2.917 4.76 4.417 9.97 5.92 1.59
1.500 2.38 3.000 4.76 4.500 9.97 6.00 1.59

Unit Hyd Qpeak (cms)= 0.662

PEAK FLOW (cms)= 0.105 (i)
TIME TO PEAK (hrs)= 4.833
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5022)
ID= 1 DT= 5.0 min
Area (ha)= 25.90
Total Imp(%)= 42.00 Dir. Conn.(%)= 30.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.88 15.02
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 415.53 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 9.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 9.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 9.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 9.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 9.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 9.97 5.50 1.59
1.083 2.38 2.583 4.76 4.083 9.97 5.58 1.59
1.167 2.38 2.667 4.76 4.167 9.97 5.67 1.59
1.250 2.38 2.750 4.76 4.250 9.97 5.75 1.59
1.333 2.38 2.833 4.76 4.333 9.97 5.83 1.59
1.417 2.38 2.917 4.76 4.417 9.97 5.92 1.59
1.500 2.38 3.000 4.76 4.500 9.97 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 9.63
over (min)= 5.00 30.00
Storage Coeff. (min)= 7.27 (ii) 29.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.17 0.04
TOTALS
PEAK FLOW (cms)= 1.20 0.22 1.280 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.87 15.02

TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.38

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0101)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0501): 25.20 0.105 4.83 5.47
+ ID2= 2 (0502): 25.90 1.280 3.00 15.02
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0101): 51.10 1.286 3.00 10.31
+ ID2= 2 (0502): 119.60 1.014 3.67 8.70
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

<----- DATA FOR SECTION (1157.9) ----->
Distance Elevation Manning
0.00 86.78 0.0900
25.34 87.17 0.0900
68.44 87.04 0.0900
117.13 86.81 0.0900
125.36 85.21 0.0900 / 0.0700 Main Channel
127.36 84.21 0.0700 Main Channel
128.86 84.21 0.0700 Main Channel
130.86 85.21 0.0700 / 0.0900 Main Channel
131.88 86.36 0.0900

140.63 86.77 0.0900
168.26 86.90 0.0900
169.81 87.10 0.0900
202.11 87.50 0.0900
239.06 87.35 0.0900
270.29 87.83 0.0900
283.90 87.90 0.0900
297.51 87.86 0.0900
324.73 87.89 0.0900
351.95 87.78 0.0900
388.59 87.46 0.0900

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.17 84.38 .114E+03 0.1 0.34 18.34
0.33 84.54 .269E+03 0.4 0.50 12.51
0.50 84.71 .465E+03 0.8 0.62 10.07
0.67 84.88 .703E+03 1.4 0.72 8.63
0.83 85.04 .982E+03 2.1 0.81 7.65
1.00 85.21 .130E+04 3.1 0.89 6.93
1.21 85.42 .177E+04 5.0 1.06 5.87
1.41 85.62 .234E+04 7.4 1.17 5.28
1.62 85.83 .300E+04 10.2 1.27 4.89
1.83 86.04 .376E+04 13.6 1.35 4.60
2.03 86.24 .462E+04 17.6 1.42 4.37
2.24 86.45 .560E+04 22.1 1.47 4.22
2.45 86.66 .695E+04 27.6 1.48 4.20
2.66 86.87 .925E+04 31.2 1.25 4.94
2.86 87.07 .168E+05 43.1 0.96 6.48
3.07 87.28 .297E+05 67.7 0.85 7.30
3.28 87.49 .456E+05 103.1 0.84 7.38
3.48 87.69 .663E+05 159.6 0.89 6.93
3.69 87.90 .907E+05 223.4 0.92 6.77

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0102) 170.70 1.81 3.00 9.18 0.76 0.77
OUTFLOW: ID= 1 (0503) 170.70 1.51 3.08 9.18 0.70 0.73

CALIB
NASHYD (5031)
ID= 1 DT= 5.0 min
Area (ha)= 1.70 Curve Number (CN)= 71.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.82

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.015 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 7.555
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.189

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 12.20
STANDHYD (5032)	Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00
ID= 1 DT= 5.0 min	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.20	5.00
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	285.19	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93
over (min)= 5.00
Storage Coeff. (min)= 5.80 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.20

PEAK FLOW (cms)= 0.92
TIME TO PEAK (hrs)= 3.00
RUNOFF VOLUME (mm)= 34.03
TOTAL RAINFALL (mm)= 40.03
RUNOFF COEFFICIENT = 0.85

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0103):	1.70	0.015	3.92	7.56
+ ID2= 2 (0103):	12.20	0.987	3.00	21.31

ID = 3 (0103): 13.90 0.990 3.00 19.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0103):	13.90	0.990	3.00	19.63
+ ID2= 2 (0503):	170.70	1.511	3.08	9.18
ID = 3 (0104):	184.60	2.303	3.00	9.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)	Routing time step (min)= 5.00
ID= 2----> OUT= 1	

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00

0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	<-pipe / channel->	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	184.60	2.30	3.00	9.97	0.62
OUTFLOW: ID= 1 (0504)	184.60	1.71	3.50	9.97	0.29

CALIB	Area (ha)= 0.30	Curve Number (CN)= 68.0
NASHYD (5041)	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 0.89	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59

1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.002 (i)
 TIME TO PEAK (hrs)= 4.000
 RUNOFF VOLUME (mm)= 6.763
 TOTAL RAINFALL (mm)= 40.032
 RUNOFF COEFFICIENT = 0.169

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5042)	Area (ha)= 7.40
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.88	2.52
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	222.11	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59

1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 18.03
 over (min) 5.00 25.00
 Storage Coeff. (min)= 4.99 (ii) 22.24 (ii)
 Unit Hyd. Tpeak (min)= 5.00 25.00
 Unit Hyd. peak (cms)= 0.21 0.05

PEAK FLOW (cms)= 0.65 0.07 *TOTALS*
 TIME TO PEAK (hrs)= 3.00 3.33 0.688 (iii)
 RUNOFF VOLUME (mm)= 34.03 9.51 3.00
 TOTAL RAINFALL (mm)= 40.03 40.03 40.03
 RUNOFF COEFFICIENT = 0.85 0.24 0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 68.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5041):	0.30	0.002	4.00	6.76
+ ID2= 2 (5042):	7.40	0.688	3.00	22.75
=====				
ID = 3 (0105):	7.70	0.689	3.00	22.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0105):	7.70	0.689	3.00	22.12
+ ID2= 2 (0504):	184.60	1.709	3.50	9.97
=====				
ID = 3 (0106):	192.30	1.869	3.33	10.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (5201)	Area (ha)= 22.80 Curve Number (CN)= 72.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.31

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.148 (i)
 TIME TO PEAK (hrs)= 4.583
 RUNOFF VOLUME (mm)= 7.844
 TOTAL RAINFALL (mm)= 40.032
 RUNOFF COEFFICIENT = 0.196

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5202)	Area (ha)= 6.90
ID= 1 DT= 5.0 min	Total Imp(%)= 23.00 Dir. Conn.(%)= 12.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.59	5.31
Dep. Storage (mm)=	6.00	8.00

Average Slope (%)= 1.00 1.00
 Length (m)= 214.48 40.00
 Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.51
 over (min) 5.00 25.00
 Storage Coeff. (min)= 4.89 (ii) 23.70 (ii)
 Unit Hyd. Tpeak (min)= 5.00 25.00
 Unit Hyd. peak (cms)= 0.22 0.05

PEAK FLOW (cms)= 0.14 0.12 *TOTALS*
 TIME TO PEAK (hrs)= 3.00 3.33 0.189 (iii)
 RUNOFF VOLUME (mm)= 34.03 9.13 12.12
 TOTAL RAINFALL (mm)= 40.03 40.03 40.03
 RUNOFF COEFFICIENT = 0.85 0.23 0.30

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
 ***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
 YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 72.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

0.90 83.86 .510E+05 58.8 0.63 14.46

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0111) 29.70 0.20 3.00 8.84 0.15 0.24
OUTFLOW: ID= 1 (0521) 29.70 0.18 4.75 8.83 0.15 0.23

CALIB
NASHYD (5211) Area (ha)= 1.90 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.019 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 9.508
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.238

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5212) Area (ha)= 13.80
ID= 1 DT= 5.0 min Total Imp(%)= 52.00 Dir. Conn.(%)= 40.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.18 6.62
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59
Max.Eff.Inten.(mm/hr)= 61.93 21.47
over (min) 5.00 25.00
Storage Coeff. (min)= 6.02 (ii) 22.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05
TOTALS
PEAK FLOW (cms)= 0.88 0.22 0.988 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.99 20.81
TOTAL RAINFALL (mm)= 40.03 40.03 40.03

RUNOFF COEFFICIENT = 0.85 0.30 0.52

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5211): 1.90 0.019 4.08 9.51
+ ID2= 2 (5212): 13.80 0.988 3.00 20.81
ID = 3 (0112): 15.70 0.990 3.00 19.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0113)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0112): 15.70 0.990 3.00 19.44
+ ID2= 2 (0521): 29.70 0.180 4.75 8.83
ID = 3 (0113): 45.40 1.039 3.00 12.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 192.30 1.869 3.33 10.45
+ ID2= 2 (0113): 45.40 1.039 3.00 12.50
ID = 3 (0114): 237.70 2.906 3.00 10.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 / 0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.70	2.91	3.00	10.84	0.36	0.34

OUTFLOW: ID= 1 (0505) 237.70 2.46 3.08 10.84 0.33 0.31

CALIB			
NASHYD (5051)	Area (ha)= 1.30	Curve Number (CN)= 68.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.62		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	42.88	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 3.667
RUNOFF VOLUME (mm)= 6.768
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.169

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5052)	Area (ha)= 14.60		

|ID= 1 DT= 5.0 min | Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	9.64	4.96
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	311.98	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	18.03
over (min)	5.00	25.00
Storage Coeff. (min)=	6.12 (ii)	23.37 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.19	0.05

TOTALS

PEAK FLOW (cms)=	1.26	0.14	1.321 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	9.51	22.75
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.24	0.57

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	1.30	0.012	3.67	6.77
+ ID2= 2 (0502):	14.60	1.321	3.00	22.75
ID = 3 (0107):	15.90	1.324	3.00	21.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0107):	15.90	1.324	3.00	21.44
+ ID2= 2 (0505):	237.70	2.456	3.08	10.84
ID = 3 (0108):	253.60	3.468	3.00	11.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)			
IN= 2--> OUT= 1	Routing time step (min)= 5.00		

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 / 0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 / 0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	

346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.11	78.34	.979E+01	0.0	0.23	21.53	
0.23	78.45	.392E+02	0.0	0.37	13.56	
0.34	78.56	.881E+02	0.1	0.48	10.35	
0.46	78.68	.157E+03	0.3	0.58	8.54	
0.57	78.79	.245E+03	0.6	0.67	7.36	
0.68	78.91	.352E+03	0.9	0.76	6.52	
0.80	79.02	.480E+03	1.4	0.84	5.88	
0.91	79.13	.627E+03	1.9	0.92	5.38	
1.03	79.25	.793E+03	2.7	0.99	4.98	
1.15	79.37	.103E+04	3.8	1.09	4.55	
1.28	79.50	.135E+04	5.2	1.16	4.28	
1.40	79.62	.175E+04	7.1	1.20	4.12	
1.52	79.75	.228E+04	9.3	1.21	4.08	
1.65	79.87	.318E+04	11.7	1.10	4.52	
1.77	80.00	.524E+04	15.8	0.90	5.52	
1.90	80.12	.973E+04	24.3	0.74	6.69	
2.02	80.24	.158E+05	39.7	0.75	6.62	
2.15	80.37	.230E+05	59.2	0.77	6.46	
2.27	80.49	.349E+05	90.3	0.77	6.44	

<---- hydrograph <----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.60	3.47	3.00	11.51	1.12	1.06
OUTFLOW: ID= 1 (0506)	253.60	3.25	3.08	11.51	1.09	1.04

CALIB						
NASHYD (5061)	Area (ha)=	3.90	Curve Number (CN)=	71.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	0.62				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38

0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	19.79
over (min)	5.00	25.00
Storage Coeff. (min)=	5.07 (ii)	21.69 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.21	0.05

PEAK FLOW (cms)=	0.68	0.08	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.33	0.717 (iii)
RUNOFF VOLUME (mm)=	34.03	10.43	22.94
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.26	0.57

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)						
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.		
	(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (5061):	3.90	0.042	3.67	7.56		
+ ID2= 2 (5062):	7.80	0.717	3.00	22.94		
ID = 3 (0109):	11.70	0.728	3.00	17.81		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)=	0.042 (i)
TIME TO PEAK (hrs)=	3.667
RUNOFF VOLUME (mm)=	7.556
TOTAL RAINFALL (mm)=	40.032
RUNOFF COEFFICIENT =	0.189

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (5062)	Area (ha)=	7.80				
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	53.00		

Surface Area (ha)=	5.07	2.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	228.04	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38

ADD HYD (0110)						
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.		
	(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (0109):	11.70	0.728	3.00	17.81		
+ ID2= 2 (0506):	253.60	3.246	3.08	11.51		
ID = 3 (0110):	265.30	3.637	3.08	11.79		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB						
NASHYD (5101)	Area (ha)=	0.80	Curve Number (CN)=	66.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	1.42				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)=	0.004 (i)
TIME TO PEAK (hrs)=	4.750
RUNOFF VOLUME (mm)=	6.296
TOTAL RAINFALL (mm)=	40.032
RUNOFF COEFFICIENT =	0.157

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min

Area (ha)= 0.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 0.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 15.40
over (min) 5.00 25.00
Storage Coeff. (min)= 2.65 (ii) 21.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.05 0.01 0.059 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.53 17.44
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.21 0.44

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5101): 0.80 0.004 4.75 6.30
+ ID2= 2 (5102): 0.90 0.059 3.00 17.44
=====

ID = 3 (0115): 1.70 0.059 3.00 12.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 / 0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 / 0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50

1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ---->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0115)	1.70	0.06	3.00	12.20	0.01	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.04	3.00	12.20	0.01	0.24

CALIB
NASHYD (5111)
ID= 1 DT= 5.0 min

Area (ha)= 1.90 Curve Number (CN)= 67.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.56

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59

1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.019 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 6.529
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.163

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min

Area (ha)= 1.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 85.63 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 18.48
over (min) 5.00 20.00
Storage Coeff. (min)= 2.82 (ii) 19.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.06
TOTALS
PEAK FLOW (cms)= 0.07 0.02 0.076 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 34.03 10.10 18.46
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5111): 1.90 0.019 3.58 6.53
+ ID2= 2 (5112): 1.10 0.076 3.00 18.46
ID = 3 (0116): 3.00 0.082 3.00 10.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0116): 3.00 0.082 3.00 10.90
+ ID2= 2 (0511): 1.70 0.043 3.00 12.20
ID = 3 (0117): 4.70 0.125 3.00 11.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 / 0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 / 0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71
0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71
0.79 80.51 .934E+03 0.9 0.46 16.84
0.93 80.64 .245E+04 1.6 0.31 24.96
1.06 80.77 .873E+04 4.6 0.25 31.51
1.19 80.90 .179E+05 11.4 0.30 26.08
1.32 81.04 .278E+05 22.6 0.38 20.45
1.46 81.17 .381E+05 37.5 0.46 16.91
1.60 81.31 .484E+05 55.4 0.54 14.57
1.74 81.45 .588E+05 76.0 0.61 12.90
1.87 81.59 .693E+05 99.3 0.67 11.63
2.01 81.72 .798E+05 125.0 0.73 10.64
2.15 81.86 .903E+05 153.1 0.80 9.83
2.29 82.00 .101E+06 183.5 0.85 9.16
2.42 82.14 .112E+06 214.3 0.90 8.68
2.56 82.27 .123E+06 244.4 0.93 8.40

hydrograph
AREA QPEAK TPEAK R.V. <-pipe / channel->
(ha) (cms) (hrs) (mm) MAX DEPTH MAX VEL
INFLOW : ID= 2 (0117) 4.70 0.12 3.00 11.37 0.37 0.28
OUTFLOW: ID= 1 (0512) 4.70 0.06 3.42 11.37 0.28 0.23

CALIB
NASHYD (5121)
ID= 1 DT= 5.0 min
Area (ha)= 0.70 Curve Number (CN)= 71.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.14

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 4.333
RUNOFF VOLUME (mm)= 7.553
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.189

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min
Area (ha)= 3.20
Total Imp(%)= 60.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.92 1.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 146.06 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 19.24
over (min) 5.00 25.00
Storage Coeff. (min)= 3.88 (ii) 20.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05
TOTALS
PEAK FLOW (cms)= 0.25 0.04 0.271 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.29 21.44
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5121): 0.70 0.005 4.33 7.55

+ ID2= 2 (5122): 3.20 0.271 3.00 21.44
=====

ID = 3 (0118): 3.90 0.272 3.00 18.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0118): 3.90 0.272 3.00 18.95
+ ID2= 2 (0512): 4.70 0.060 3.42 11.37
=====

ID = 3 (0119): 8.60 0.317 3.00 14.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0110): 265.30 3.637 3.08 11.79
+ ID2= 2 (0119): 8.60 0.317 3.00 14.81
=====

ID = 3 (0120): 273.90 3.858 3.00 11.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6011) Area (ha)= 44.10 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59

0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 8.91
over (min) 5.00 30.00
Storage Coeff. (min)= 5.63 (ii) 28.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.20 0.04

PEAK FLOW (cms)= 0.28 0.11 0.323 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.61 10.99
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.27

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (6011): 44.10 0.275 3.92 5.47
+ ID2= 2 (6012): 11.00 0.323 3.00 10.99
=====

ID = 3 (0124): 55.10 0.372 3.75 6.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021) Area (ha)= 43.60 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.275 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6012) Area (ha)= 11.00
ID= 1 DT= 5.0 min Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.08 7.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.247 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022) Area (ha)= 12.90
ID= 1 DT= 5.0 min Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 9.23
over (min) 5.00 30.00
Storage Coeff. (min)= 5.90 (ii) 28.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.19 0.04

PEAK FLOW (cms)= 0.48 0.12 0.519 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.72 13.00
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.32

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6021):	43.60	0.247	4.08	5.47
+ ID2= 2 (6022):	12.90	0.519	3.00	13.00

ID = 3 (0125): 56.50 0.549 3.00 7.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0124):	55.10	0.372	3.75	6.57
+ ID2= 2 (0125):	56.50	0.549	3.00	7.19
ID = 3 (0126):	111.60	0.915	3.00	6.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

DATA FOR SECTION (2135.9)				
Distance	Elevation	Manning		
0.00	92.58	0.1400		
8.54	92.59	0.1400		
22.11	92.47	0.1400		
48.74	91.83	0.1400		
67.59	91.58	0.1400		
86.45	91.21	0.1400		
103.50	90.80	0.1400		
118.09	90.23	0.1400		
127.84	90.09	0.1400 /0.0700	Main Channel	
129.84	89.59	0.0700	Main Channel	
130.34	90.09	0.0700 /0.1400	Main Channel	
140.57	90.14	0.1400		
161.87	90.11	0.1400		
177.03	90.04	0.1400		
188.67	89.87	0.1400		
199.59	90.31	0.1400		
212.02	90.96	0.1400		
225.58	91.35	0.1400		
252.71	91.66	0.1400		
274.11	91.86	0.1400		

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83

0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

hydrograph				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0126)	111.60	0.92	3.00	6.88
OUTFLOW: ID= 1 (0603)	111.60	0.52	4.83	6.88

CALIB	
NASHYD (6031)	Area (ha)= 19.00 Curve Number (CN)= 72.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 1.32

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59

1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.123 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 7.844
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.196

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6032)	Area (ha)= 15.70
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.40	11.30
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	323.52	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59

1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 15.59
over (min) 5.00 25.00
Storage Coeff. (min)= 6.26 (ii) 24.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

TOTALS
PEAK FLOW (cms)= 0.37 0.26 0.493 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.46 13.14
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.24 0.33

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0127)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6031):	19.00	0.123	4.58	7.84
+ ID2= 2 (6032):	15.70	0.493	3.00	13.14
ID = 3 (0127):	34.70	0.501	3.00	10.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	9.00	Curve Number (CN)=	70.0
NASHYD (6101)	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	1.23		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.279

PEAK FLOW (cms)= 0.057 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 7.282
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.182

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	12.10
STANDHYD (6102)	Total Imp(%)=	27.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	16.00

Surface Area (ha)=	3.27	IMPERVIOUS (i)	8.83
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	284.02		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38

0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 13.64
over (min) 5.00 30.00
Storage Coeff. (min)= 5.79 (ii) 25.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.20 0.04

TOTALS
PEAK FLOW (cms)= 0.31 0.17 0.374 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 8.57 12.64
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.21 0.32

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6101):	9.00	0.057	4.50	7.28
+ ID2= 2 (6102):	12.10	0.374	3.00	12.64
ID = 3 (0136):	21.10	0.378	3.00	10.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0127):	34.70	0.501	3.00	10.24
+ ID2= 2 (0136):	21.10	0.378	3.00	10.36
ID = 3 (0128):	55.80	0.880	3.00	10.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	55.80	0.880	3.00	10.28
+ ID2= 2 (0603):	111.60	0.522	4.83	6.88
ID = 1 (0128):	167.40	1.054	3.00	8.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

Distance	Elevation	Manning	
0.00	86.75	0.0900	
3.09	87.40	0.0900	
18.33	87.41	0.0900	
35.33	86.99	0.0900	
73.84	86.75	0.0900	
103.33	86.41	0.0900	
120.33	86.11	0.0900	
129.46	86.13	0.0900	
143.37	85.32	0.0900	
154.33	85.02	0.0900	
161.57	85.09	0.0900	
163.05	84.78	0.0900 / 0.0700	Main Channel
166.55	83.78	0.0700	Main Channel
168.05	84.78	0.0700 / 0.1100	Main Channel
172.02	85.29	0.1100	
191.39	86.19	0.1100	
270.18	85.78	0.1100	
296.33	86.36	0.1100	
324.34	86.68	0.1100	

368.56 87.05 0.1100

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

----- hydrograph ----- <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.40	1.05	3.00	8.01	1.58	0.09
OUTFLOW: ID= 1 (0604)	167.40	0.66	5.75	8.00	1.48	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB	Area (ha)=	1.70	Curve Number (CN)=	79.0
NASHYD (6041)	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	4.12		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38

0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.006 (i)
TIME TO PEAK (hrs)= 7.750
RUNOFF VOLUME (mm)= 10.301
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.257

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	22.30
STANDHYD (6042)	Total Imp(%)=	65.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	53.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	14.49	7.81
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	385.57	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38

0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	31.30
over (min)	5.00	25.00
Storage Coeff. (min)=	6.95 (ii)	20.78 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.17	0.05
		TOTALS
PEAK FLOW (cms)=	1.84	0.33
TIME TO PEAK (hrs)=	3.00	3.33
RUNOFF VOLUME (mm)=	34.03	13.76
TOTAL RAINFALL (mm)=	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.34

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6041):	1.70	0.006	7.75	10.30
+ ID2= 2 (6042):	22.30	2.010	3.00	24.51
ID = 3 (0129):	24.00	2.010	3.00	23.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3				

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0129):	24.00	2.010	3.00	23.50
+ ID2= 2 (0604):	167.40	0.662	5.75	8.00
ID = 3 (0130):	191.40	2.299	3.00	9.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)	Routing time step (min)=	5.00
IN= 2--> OUT= 1		

----- DATA FOR SECTION (801.4) -----

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 / 0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100
404.40	82.68	0.1100

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88

1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

		<--- hydrograph <--->			<-pipe / channel->		
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (	0130)	191.40	2.30	3.00	9.95	0.85	0.27
OUTFLOW: ID= 1 (	0605)	191.40	0.94	3.75	9.95	0.73	0.26

CALIB					
NASHYD (6111)	Area (ha)=	0.60	Curve Number (CN)=	77.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	1.08			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYTEOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN				
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr				
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38				
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38				
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38				
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38				
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38				
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38				
0.583	2.38	2.083	4.76	3.583	8.73	5.08	1.59				
0.667	2.38	2.167	4.76	3.667	8.73	5.17	1.59				
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59				
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59				
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59				
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59				
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59				
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59				
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59				
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59				
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59				
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59				

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84

		<--- hydrograph --->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.70	3.02	3.00	11.46	0.48	0.54
OUTFLOW: ID= 1 (0530)	218.70	2.15	3.08	11.46	0.43	0.50

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	3.48	2.32
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	196.64	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

-- TRANSFORMED HYGTOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	273.90	3.858	3.00	11.88
+ ID2= 2 (0134):	224.50	2.385	3.08	11.70

ID = 3 (0135): 498.40 6.202 3.08 11.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50

RUNOFF COEFFICIENT = 0.211

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5072)
ID= 1 DT= 5.0 min

Area (ha)= 40.50
Total Imp(%)= 45.00

Dir. Conn.(%)= 30.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.23	22.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	519.62	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Max.Eff.Inten.(mm/hr)=	61.93	19.80
over (min)	10.00	25.00
Storage Coeff. (min)=	8.32 (ii)	24.92 (ii)
Unit Hyd. Tpeak (min)=	10.00	25.00
Unit Hyd. peak (cms)=	0.13	0.05

PEAK FLOW (cms)= 1.69 0.64
TIME TO PEAK (hrs)= 3.00 3.33

TOTALS
1.994 (iii)
3.00

2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.40	6.20	3.08	11.80	1.34	0.68
OUTFLOW: ID= 1 (0507)	498.40	4.55	3.50	11.80	1.19	0.61

CALIB
NASHYD (5071)
ID= 1 DT= 5.0 min

Area (ha)= 8.40
Ia (mm)= 8.00
U.H. Tp(hrs)= 1.72

Curve Number (CN)= 74.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38	
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38	
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38	
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38	
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38	
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38	
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59	
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59	
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59	
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59	
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59	
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59	
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59	
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59	
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59	
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59	
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59	
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59	

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.049 (i)
TIME TO PEAK (hrs)= 5.167
RUNOFF VOLUME (mm)= 8.460
TOTAL RAINFALL (mm)= 40.032

RUNOFF VOLUME (mm)= 34.03 10.96 17.88
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.27 0.45

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5071):	8.40	0.049	5.17	8.46
+ ID2= 2 (5072):	40.50	1.994	3.00	17.88
ID = 3 (0121):	48.90	1.996	3.00	16.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	48.90	1.996	3.00	16.27
+ ID2= 2 (0507):	498.40	4.548	3.50	11.80
ID = 3 (0122):	547.30	5.692	3.25	12.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min

AREA (ha)= 253.60
QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 47.57

TIME	FLOW	TIME	FLOW	TIME	FLOW	'	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16	
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16	
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16	
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16	
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17	
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16	

17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.31	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.24	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12

21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11

25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.11
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10

18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.44	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13

26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10

22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.1		

READ STORM
Filename: C:\Users\jannaormond\AppData\Local\Temp\ec528c0d-4c97-4ad9-80b7-e31bdfec4424\as5d16dec
Ptotal= 91.90 mm
Comments: Mount Hope-6 hour SCS Distribution Desig

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	3.68	1.50	9.19	3.00	20.22	4.50	5.51
0.17	3.68	1.67	9.19	3.17	20.22	4.67	5.51
0.33	3.68	1.83	9.19	3.33	20.22	4.83	5.51
0.50	5.51	2.00	11.03	3.50	9.19	5.00	3.68
0.67	5.51	2.17	11.03	3.67	9.19	5.17	3.68
0.83	5.51	2.33	11.03	3.83	9.19	5.33	3.68
1.00	5.51	2.50	55.14	4.00	7.35	5.50	3.68
1.17	5.51	2.67	99.25	4.17	7.35	5.67	3.68
1.33	5.51	2.83	143.36	4.33	7.35	5.83	3.68

CALIB
NASHYD (5011)
ID= 1 DT= 5.0 min
Area (ha)= 80.20
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.85
Curve Number (CN)= 65.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68

1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68
1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.123 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 31.899
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.347

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 39.40
Total Imp(%)= 38.00
Dir. Conn.(%)= 24.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.97 24.43
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 90.00
over (min)= 5.00 15.00
Storage Coeff. (min)= 5.90 (ii) 14.96 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08
PEAK FLOW (cms)= 3.51 3.29 6.214 (iii)
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 37.01 48.74
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.53
TOTALS

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5011): 80.20 3.123 3.83 31.90
+ ID2= 2 (5012): 39.40 6.214 3.00 48.74
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

----- DATA FOR SECTION (1537.5) -----
Distance Elevation Manning
0.00 89.30 0.1100
4.20 89.28 0.1100
9.03 88.80 0.1100
21.55 88.78 0.1100
29.06 88.24 0.1100
39.87 87.83 0.1100
55.54 87.84 0.1100 / 0.0700 Main Channel
57.54 86.84 0.0700 Main Channel
59.04 86.84 0.0700 Main Channel
61.04 87.84 0.0700 / 0.1100 Main Channel
74.10 87.86 0.1100

87.72 88.07 0.1100
101.34 88.18 0.1100
113.53 88.23 0.1100
128.57 88.32 0.1100
142.19 88.61 0.1100
155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV. TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 86.94 .202E+03 0.0 0.25 78.80
0.20 87.04 .452E+03 0.1 0.37 52.91
0.30 87.14 .749E+03 0.3 0.47 42.34
0.40 87.24 .109E+04 0.5 0.55 36.26
0.50 87.34 .149E+04 0.8 0.62 32.18
0.60 87.44 .193E+04 1.1 0.68 29.19
0.70 87.54 .241E+04 1.5 0.74 26.87
0.80 87.64 .295E+04 2.0 0.79 25.01
0.90 87.74 .353E+04 2.5 0.84 23.46
1.00 87.84 .421E+04 3.1 0.89 22.39
1.10 87.94 .489E+04 4.5 0.63 31.56
1.21 88.05 .150E+05 7.1 0.56 35.43
1.33 88.17 .233E+05 10.6 0.54 36.49
1.44 88.28 .346E+05 15.5 0.53 37.18
1.56 88.40 .484E+05 22.8 0.56 35.35
1.67 88.51 .634E+05 32.1 0.60 32.90
1.79 88.63 .807E+05 41.2 0.61 32.65
1.90 88.74 .101E+06 54.6 0.64 30.77
2.02 88.86 .124E+06 64.7 0.62 31.85

----- hydrograph -----<-pipe / channel-->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 119.60 6.95 3.00 37.45 1.21 0.56
OUTFLOW: ID= 1 (0502) 119.60 4.38 4.00 37.44 1.09 0.65

CALIB
NASHYD (5021)
ID= 1 DT= 5.0 min
U.H. Tp(hrs)= 1.46
Area (ha)= 25.20
Ia (mm)= 8.00
Curve Number (CN)= 62.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.662

PEAK FLOW (cms)= 0.596 (i)
 TIME TO PEAK (hrs)= 4.667
 RUNOFF VOLUME (mm)= 29.382
 TOTAL RAINFALL (mm)= 91.900
 RUNOFF COEFFICIENT = 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5022)			
ID= 1 DT= 5.0 min			
Area (ha)=	25.90	Total Imp(%)=	42.00
Dir. Conn.(%)=	30.00		
IMPERVIOUS PVIOUS (i)			
Surface Area (ha)=	10.88	15.02	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	415.53	40.00	
Mannings n	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36
 over (min)= 5.00
 Storage Coeff. (min)= 5.20 (ii)
 Unit Hyd. Tpeak (min)= 5.00
 Unit Hyd. peak (cms)= 0.21

TOTALS

PEAK FLOW (cms)= 2.93
 TIME TO PEAK (hrs)= 3.00
 RUNOFF VOLUME (mm)= 85.90
 TOTAL RAINFALL (mm)= 91.90
 RUNOFF COEFFICIENT = 0.93

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 62.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0101)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0101):	25.20	0.596	4.67	29.38
+ ID2= 2 (5022):	25.90	4.433	3.00	49.52
ID = 3 (0101):	51.10	4.492	3.00	39.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0101):	51.10	4.492	3.00	39.59
+ ID2= 2 (0502):	119.60	4.377	4.00	37.44
ID = 3 (0102):	170.70	6.968	3.00	38.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	
IN= 2---> OUT= 1	
Routing time step (min)=	5.00

<----- DATA FOR SECTION (1157.9) ----->					
Distance	Elevation	Manning			
0.00	86.78	0.0900			
25.34	87.17	0.0900			
68.44	87.04	0.0900			
117.13	86.81	0.0900			
125.36	85.21	0.0900 / 0.0700	Main Channel		
127.36	84.21	0.0700	Main Channel		
128.86	84.21	0.0700	Main Channel		
130.86	85.21	0.0700 / 0.0900	Main Channel		
131.88	86.36	0.0900			
140.63	86.77	0.0900			
168.26	86.90	0.0900			
169.81	87.10	0.0900			
202.11	87.50	0.0900			
239.06	87.35	0.0900			
270.29	87.83	0.0900			
283.90	87.90	0.0900			
297.51	87.86	0.0900			
324.73	87.89	0.0900			
351.95	87.78	0.0900			
388.59	87.46	0.0900			

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65

1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

		<---- hydrograph ---->			<-pipe / channel->	
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)
INFLOW : ID= 2 (0102)	170.70	6.97	3.00	38.09	1.38	1.15
OUTFLOW: ID= 1 (0503)	170.70	6.51	3.08	38.09	1.34	1.13

CALIB	
NASHYD (5031)	
ID= 1 DT= 5.0 min	
Area (ha)=	1.70
Ia (mm)=	8.00
U.H. Tp(hrs)=	0.82
Curve Number (CN)=	71.0
# of Linear Res.(N)=	3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68

1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.080 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 37.512
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.408

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 12.20
STANDHYD (5032)	Total Imp(%)= 59.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.20	5.00
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	285.19	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68

1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 113.20
over (min) 5.00 15.00
Storage Coeff. (min)= 4.15 (ii) 12.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS
PEAK FLOW (cms)= 2.21 0.94 3.003 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 44.26 63.83
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.48 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5031):	1.70	0.080	3.83	37.51
+ ID2= 2 (5032):	12.20	3.003	3.00	63.83
=====				
ID = 3 (0103):	13.90	3.023	3.00	60.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0103):	13.90	3.023	3.00	60.61
+ ID2= 2 (0503):	170.70	6.509	3.08	38.09
=====				
ID = 3 (0104):	184.60	8.794	3.00	39.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0504)|

| IN= 2--> OUT= 1 | Routing time step (min)*= 5.00

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<----- hydrograph ----->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL

	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	184.60	8.79	3.00	39.78	0.82	0.34
OUTFLOW : ID= 1 (0504)	184.60	7.03	3.33	39.78	0.79	0.33

CALIB	Area (ha)= 0.30	Curve Number (CN)= 68.0
NASHYD (5041)	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 0.89	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.013

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 34.596
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.376

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min

Area (ha)= 7.40
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 4.88 2.52
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 222.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 113.36
over (min) 5.00 15.00
Storage Coeff. (min)= 3.57 (ii) 11.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

PEAK FLOW (cms)= 1.56 0.48
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 42.41
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0105)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5041): 0.30 0.012 3.92 34.60
+ ID2= 2 (5042): 7.40 1.963 3.00 65.89
ID = 3 (0105): 7.70 1.966 3.00 64.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0106)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0105): 7.70 1.966 3.00 64.67
+ ID2= 2 (0504): 184.60 7.029 3.33 39.78
ID = 3 (0106): 192.30 7.617 3.25 40.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5201)
ID= 1 DT= 5.0 min
Area (ha)= 22.80 Curve Number (CN)= 72.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.31

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68

0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.773 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 38.533
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.419

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min

Area (ha)= 6.90
Total Imp(%)= 23.00 Dir. Conn.(%)= 12.00

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 1.59 5.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 214.48 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0111)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5201): 22.80 0.773 4.42 38.53
+ ID2= 2 (5202): 6.90 1.025 3.00 47.33
ID = 3 (0111): 29.70 1.123 3.00 40.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0521)
IN= 2--> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) ----->

Distance	Elevation	Manning
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900 / 0.0700
513.93	82.96	0.0700
526.85	83.23	0.0700 / 0.0900
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	83.00	.378E+02	0.0	0.11	83.81
0.09	83.05	.151E+03	0.0	0.17	52.79
0.14	83.09	.340E+03	0.1	0.22	40.29
0.18	83.14	.605E+03	0.3	0.27	33.26
0.23	83.18	.946E+03	0.5	0.32	28.66
0.27	83.23	.151E+04	0.9	0.33	27.77
0.32	83.27	.323E+04	1.8	0.31	29.51
0.37	83.32	.510E+04	3.2	0.34	26.44
0.42	83.37	.713E+04	5.0	0.38	23.61
0.46	83.42	.934E+04	7.3	0.42	21.44
0.51	83.47	.121E+05	10.0	0.45	20.23
0.56	83.52	.156E+05	13.4	0.47	19.44
0.61	83.57	.196E+05	17.7	0.49	18.52
0.66	83.61	.240E+05	22.8	0.52	17.49
0.71	83.66	.286E+05	28.4	0.54	16.75
0.75	83.71	.336E+05	34.7	0.56	16.14
0.80	83.76	.390E+05	41.8	0.58	15.55
0.85	83.81	.448E+05	49.8	0.60	14.99
0.90	83.86	.510E+05	58.8	0.63	14.46

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0111)	29.70	1.12	3.00	40.58	0.28
OUTFLOW: ID= 1 (0521)	29.70	0.87	4.58	40.56	0.27

CALIB	Area (ha)=	1.90	Curve Number (CN)=	77.0
NASHYD (5211)	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.095 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 44.057
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.479

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	13.80
STANDHYD (5212)	Total Imp(%)=	52.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	40.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	7.18		6.62	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	303.32		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	123.41
over (min)	5.00	15.00
Storage Coeff. (min)=	4.30 (ii)	12.29 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.23	0.09
PEAK FLOW (cms)=	2.12	1.38
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	50.00
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.54

TOTALS

3.297 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5211):	1.90	0.095	3.92	44.06
+ ID2= 2 (5212):	13.80	3.297	3.00	64.36

ID = 3 (0112): 15.70 3.317 3.00 61.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0113)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0112):	15.70	3.317	3.00	61.90
+ ID2= 2 (0521):	29.70	0.867	4.58	40.56
ID = 3 (0113):	45.40	3.689	3.00	47.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	192.30	7.617	3.25	40.78
+ ID2= 2 (0113):	45.40	3.689	3.00	47.94
ID = 3 (0114):	237.70	10.667	3.00	42.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)	Routing time step (min)=	5.00
IN= 2----> OUT= 1		

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100
69.13	79.02	0.1100
92.42	79.04	0.1100
98.70	80.89	0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100
266.11	81.68	0.1100
306.94	81.73	0.1100
331.74	81.55	0.1100 / 0.0700
336.74	80.15	0.0700
346.34	81.64	0.0700 / 0.0900
394.77	81.68	0.0900

431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.12	79.13	.418E+03	0.4	0.15	18.59	
0.23	79.25	.899E+03	1.3	0.25	11.41	
0.35	79.36	.140E+04	2.7	0.33	8.70	
0.46	79.48	.191E+04	4.4	0.39	7.22	
0.58	79.59	.244E+04	6.5	0.46	6.26	
0.69	79.71	.299E+04	8.9	0.51	5.58	
0.81	79.82	.355E+04	11.7	0.56	5.08	
0.92	79.94	.413E+04	14.7	0.61	4.68	
1.04	80.05	.472E+04	18.1	0.65	4.36	
1.15	80.17	.533E+04	21.7	0.70	4.09	
1.27	80.28	.598E+04	25.7	0.74	3.88	
1.38	80.40	.666E+04	29.7	0.76	3.74	
1.50	80.51	.740E+04	33.7	0.78	3.67	
1.61	80.63	.822E+04	38.1	0.79	3.59	
1.73	80.74	.909E+04	43.1	0.81	3.52	
1.84	80.86	.100E+05	48.6	0.83	3.45	
1.96	80.97	.111E+05	48.4	0.74	3.83	
2.07	81.09	.128E+05	43.8	0.59	4.86	
2.19	81.21	.155E+05	40.6	0.45	6.35	

<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.70	10.67	3.00	42.15	0.77	0.54
OUTFLOW: ID= 1 (0505)	237.70	10.06	3.08	42.15	0.74	0.53

CALIB						
NASHYD (5051)	Area (ha)=	1.30	Curve Number (CN)=	68.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	0.62				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51

0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	113.36	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.38 (ii)	12.64 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.23	0.08	
			TOTALS
PEAK FLOW (cms)=	3.03	0.92	3.803 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	42.41	65.89
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.46	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (5051):	1.30	0.069	3.58	34.60	
+ ID2= 2 (5052):	14.60	3.803	3.00	65.89	
ID = 3 (0107):	15.90	3.828	3.00	63.34	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.069 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 34.601
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.377

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5052)	Area (ha)=	14.60			
ID= 1 DT= 5.0 min	Total Imp(%)=	66.00	Dir. Conn.(%)=	54.00	

IMPERVIOUS PERVIOUS (i)			
Surface Area (ha)=	9.64	4.96	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	311.98	40.00	
Mannings n	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51

ADD HYD (0108)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0107):	15.90	3.828	3.00	63.34	
+ ID2= 2 (0505):	237.70	10.055	3.08	42.15	
ID = 3 (0108):	253.60	12.701	3.00	43.48	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)					
IN= 2----> OUT= 1	Routing time step (min)=	5.00			

<----- DATA FOR SECTION (304.1) ----->					
Distance	Elevation	Manning			
0.00	81.42	0.0900			
7.45	81.36	0.0900			
32.34	80.38	0.0900			
45.97	80.05	0.0900			
65.23	79.93	0.0900			
84.49	80.35	0.0900			
113.49	80.02	0.0900			
136.48	80.07	0.0900			
188.81	79.81	0.0900			
197.86	79.25	0.0900 / 0.0700	Main Channel		
200.70	78.22	0.0700	Main Channel		
203.29	79.35	0.0700 / 0.0900	Main Channel		
204.01	79.67	0.0900			
236.47	80.40	0.0900			
277.80	80.48	0.0900			
305.35	80.37	0.0900			
346.67	80.41	0.0900			
387.99	80.33	0.0900			
415.54	80.53	0.0900			
447.88	80.49	0.0900			

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.11	78.34	.979E+01	0.0	0.23	21.53	
0.23	78.45	.392E+02	0.0	0.37	13.56	
0.34	78.56	.881E+02	0.1	0.48	10.35	
0.46	78.68	.157E+03	0.3	0.58	8.54	
0.57	78.79	.245E+03	0.6	0.67	7.36	
0.68	78.91	.352E+03	0.9	0.76	6.52	
0.80	79.02	.480E+03	1.4	0.84	5.88	
0.91	79.13	.627E+03	1.9	0.92	5.38	
1.03	79.25	.793E+03	2.7	0.99	4.98	

1.15 79.37 .103E+04 3.8 1.09 4.55
1.28 79.50 .135E+04 5.2 1.16 4.28
1.40 79.62 .175E+04 7.1 1.20 4.12
1.52 79.75 .228E+04 9.3 1.21 4.08
1.65 79.87 .318E+04 11.7 1.10 4.52
1.77 80.00 .524E+04 15.8 0.90 5.52
1.90 80.12 .973E+04 24.3 0.74 6.69
2.02 80.24 .158E+05 39.7 0.75 6.62
2.15 80.37 .230E+05 59.2 0.77 6.46
2.27 80.49 .349E+05 90.3 0.77 6.44

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 253.60 12.70 3.00 43.48 1.68 1.04
OUTFLOW : ID= 1 (0506) 253.60 11.73 3.17 43.48 1.65 1.09

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.227 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 37.512
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.408

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5062) | Area (ha)= 7.80
ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.07 2.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 228.04 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 9.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 9.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 9.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 9.19 6.00 3.68

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 9.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 9.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 9.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 9.19 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 119.99

over (min) 5.00 15.00
Storage Coeff. (min)= 3.63 (ii) 11.71 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
TOTALS
PEAK FLOW (cms)= 1.61 0.56 2.083 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 45.26 66.80
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5061): 3.90 0.227 3.58 37.51
+ ID2= 2 (5062): 7.80 2.083 3.00 66.80
ID = 3 (0109): 11.70 2.166 3.00 57.04

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0109): 11.70 2.166 3.00 57.04
+ ID2= 2 (0506): 253.60 11.731 3.17 43.48
ID = 3 (0110): 265.30 12.737 3.17 44.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5101) | Area (ha)= 0.80 Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 9.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 9.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 9.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 9.19 6.00 3.68

Unit Hyd Qpeak (cms)= 0.022

PEAK FLOW (cms)= 0.022 (i)
TIME TO PEAK (hrs)= 4.583
RUNOFF VOLUME (mm)= 32.775
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.357

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5102) | Area (ha)= 0.90
ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 0.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 101.50
over (min) 5.00 15.00
Storage Coeff. (min)= 1.90 (ii) 10.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

TOTALS

PEAK FLOW (cms)= 0.13 0.08 0.192 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 39.44 55.70
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.43 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5101):	0.80	0.022	4.58	32.78

+ ID2= 2 (5102): 0.90 0.192 3.00 55.70
=====

ID = 3 (0115): 1.70 0.195 3.00 44.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 /0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 /0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ---->				<-pipe / channel-->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0115)	1.70	0.19	3.00	44.91	0.04 0.24

OUTFLOW: ID= 1 (0511) 1.70 0.14 3.08 44.91 0.03 0.24

CALIB	Area	(ha)=	1.90	Curve Number (CN)=	67.0
NASHYD (5111)	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		0.56		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.106 (i)
TIME TO PEAK (hrs)= 3.500
RUNOFF VOLUME (mm)= 33.678
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.366

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area	(ha)=	1.10
STANDHYD (5112)			

ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.55	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	85.63	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 114.19
over (min) 5.00 15.00
Storage Coeff. (min)= 2.02 (ii) 10.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

TOTALS

PEAK FLOW (cms)= 0.15 0.11 0.248 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 44.41 58.93
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.48 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5111):	1.90	0.106	3.50	33.68
+ ID2= 2 (5112):	1.10	0.248	3.00	58.93
=====				
ID = 3 (0116):	3.00	0.291	3.00	42.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0117)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0116):	3.00	0.291	3.00	42.94
+ ID2= 2 (0511):	1.70	0.141	3.08	44.91
=====				
ID = 3 (0117):	4.70	0.426	3.00	43.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)				
IN= 2----> OUT= 1				
Routing time step (min)'= 5.00				
<----- DATA FOR SECTION (484.2) ----->				
Distance	Elevation	Manning		
0.00	80.80	0.0900		
9.73	80.46	0.0900		
14.10	82.04	0.0900		
17.18	82.28	0.0900		
41.13	82.12	0.0900 / 0.0700	Main Channel	
46.88	79.71	0.0700	Main Channel	
51.41	80.90	0.0700 / 0.0900	Main Channel	
94.29	80.56	0.0900		
175.64	80.72	0.0900		
192.09	80.85	0.0900		
<----- TRAVEL TIME TABLE ----->				
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)
0.13	79.84	.255E+02	0.0	0.14
				TRAV.TIME (min)
				54.71

0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.026 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 37.509
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.408

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (5122)				
ID= 1 DT= 5.0 min				
Area (ha)= 3.20				
Total Imp(%)= 60.00 Dir. Conn.(%)= 47.00				
IMPERVIOUS PERVIOUS (i)				
Surface Area (ha)=	1.92	1.28		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	146.06	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68

0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ---->					<-pipe / channel->	
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)		MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0117)	4.70	0.43	3.00	43.65	0.59	0.38
OUTFLOW: ID= 1 (0512)	4.70	0.27	3.25	43.64	0.50	0.34

CALIB				
NASHYD (5121)				
ID= 1 DT= 5.0 min				
Area (ha)= 0.70				
Ia (mm)= 8.00				
U.H. Tp(hrs)= 1.14				
Curve Number (CN)= 71.0				
# of Linear Res. (N)= 3.00				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68

1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 117.57
over (min) 5.00 15.00
Storage Coeff. (min)= 2.78 (ii) 10.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

PEAK FLOW (cms)= 0.59 0.26 0.816 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 44.91 64.17
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0118)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5121):	0.70	0.026	4.17	37.51
+ ID2= 2 (5122):	3.20	0.816	3.00	64.17
=====				
ID = 3 (0118):	3.90	0.821	3.00	59.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0119)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0118):	3.90	0.821	3.00	59.39
+ ID2= 2 (0512):	4.70	0.270	3.25	43.64
=====				
ID = 3 (0119):	8.60	1.020	3.00	50.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.30	12.737	3.17	44.07
+ ID2= 2 (0119):	8.60	1.020	3.00	50.78
=====				
ID = 3 (0120):	273.90	13.408	3.08	44.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6011)	Area	(ha)= 44.10	Curve Number (CN)= 62.0	
ID= 1 DT= 5.0 min	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
=====				
	U.H. Tp(hrs)=	0.83		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.596 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 29.382

TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6012)	Area	(ha)= 11.00	
ID= 1 DT= 5.0 min	Total Imp(%)=	28.00	Dir. Conn.(%)= 16.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	3.08	7.92				
Dep. Storage	(mm)=	6.00	8.00				
Average Slope	(%)=	1.00	1.00				
Length	(m)=	270.80	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 76.68
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.02 (ii) 13.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
PEAK FLOW (cms)= 0.68 0.94
TOTALS 1.451 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 33.10 41.55
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.36 0.45

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	1.596	3.83	29.38
+ ID2= 2 (6012):	11.00	1.451	3.00	41.55
=====				
ID = 3 (0124):	55.10	1.931	3.50	31.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)	Area	(ha)= 43.60	Curve Number (CN)= 62.0	
ID= 1 DT= 5.0 min	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
=====				
	U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68

0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.426 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 29.382
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6022)	Area	(ha)= 12.90	
ID= 1 DT= 5.0 min	Total Imp(%)=	35.00	Dir. Conn.(%)= 23.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	4.51	8.38				
Dep. Storage	(mm)=	6.00	8.00				
Average Slope	(%)=	1.00	1.00				
Length	(m)=	293.26	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68

1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	78.70	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.22 (ii)	13.78 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.08	
TOTALS			
PEAK FLOW (cms)=	1.14	1.02	1.979 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	33.48	45.53
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.36	0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (6021):	43.60	1.426	4.00	29.38	
+ ID2= 2 (6022):	12.90	1.979	3.00	45.53	
=====					
ID = 3 (0125):	56.50	2.259	3.00	33.07	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0124):	55.10	1.931	3.50	31.81	
+ ID2= 2 (0125):	56.50	2.259	3.00	33.07	
=====					
ID = 3 (0126):	111.60	4.090	3.00	32.45	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)		Routing time step (min)'= 5.00	
IN= 2----> OUT= 1			
<----- DATA FOR SECTION (2135.9) ----->			
Distance	Elevation	Manning	
0.00	92.58	0.1400	
8.54	92.59	0.1400	
22.11	92.47	0.1400	
48.74	91.83	0.1400	
67.59	91.58	0.1400	
86.45	91.21	0.1400	
103.50	90.80	0.1400	
118.09	90.23	0.1400	
127.84	90.09	0.1400 /0.0700	Main Channel
129.84	89.59	0.0700	Main Channel
130.34	90.09	0.0700 /0.1400	Main Channel
140.57	90.14	0.1400	
161.87	90.11	0.1400	
177.03	90.04	0.1400	
188.67	89.87	0.1400	
199.59	90.31	0.1400	
212.02	90.96	0.1400	
225.58	91.35	0.1400	
252.71	91.66	0.1400	
274.11	91.86	0.1400	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85

3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0126)	111.60	4.09	3.00	32.45	0.69
OUTFLOW: ID= 1 (0603)	111.60	2.68	4.50	32.44	0.62

CALIB			
NASHYD (6031)	Area (ha)= 19.00	Curve Number (CN)= 72.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.32		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)=	0.642 (i)
TIME TO PEAK (hrs)=	4.417
RUNOFF VOLUME (mm)=	38.533
TOTAL RAINFALL (mm)=	91.900
RUNOFF COEFFICIENT =	0.419

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6032)			
ID= 1 DT= 5.0 min			
Area (ha)=	15.70		
Total Imp(%)=	28.00	Dir. Conn.(%)=	15.00
IMPERVIOUS			
Surface Area (ha)=	4.40	PERVIOUS (i)	
Dep. Storage (mm)=	6.00		
Average Slope (%)=	1.00		
Length (m)=	323.52		
Mannings n =	0.013		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	100.72
over (min)	5.00	15.00
Storage Coeff. (min)=	4.47 (ii)	13.14 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.23	0.08

PEAK FLOW (cms)=	0.90	1.83	2.434 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	42.93	49.37
TOTAL RAINFALL (mm)=	91.90	91.90	91.90

RUNOFF COEFFICIENT = 0.93 0.47 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0127)
1 + 2 = 3
ID1= 1 (6031): 19.00 0.642 4.42 38.53
+ ID2= 2 (6032): 15.70 2.434 3.00 49.37
ID = 3 (0127): 34.70 2.515 3.00 43.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6101)
ID= 1 DT= 5.0 min
Area (ha)= 9.00 Curve Number (CN)= 70.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.23

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 7.35 5.58 3.68

1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.04
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.14 (ii) 13.12 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 0.75 1.30 1.828 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 40.19 47.50
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.44 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)
1 + 2 = 3
ID1= 1 (6101): 9.00 0.304 4.33 36.52
+ ID2= 2 (6102): 12.10 1.828 3.00 47.50
ID = 3 (0136): 21.10 1.870 3.00 42.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
1 + 2 = 3
ID1= 1 (0127): 34.70 2.515 3.00 43.44
+ ID2= 2 (0136): 21.10 1.870 3.00 42.82
ID = 3 (0128): 55.80 4.385 3.00 43.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Unit Hyd Qpeak (cms)= 0.279

PEAK FLOW (cms)= 0.304 (i)
TIME TO PEAK (hrs)= 4.333
RUNOFF VOLUME (mm)= 36.518
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.397

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min
Area (ha)= 12.10
Total Imp(%)= 27.00 Dir. Conn.(%)= 16.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.27 8.83
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 284.02 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68

1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.04
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.14 (ii) 13.12 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 0.75 1.30 1.828 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 40.19 47.50
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.44 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)
1 + 2 = 3
ID1= 1 (6101): 9.00 0.304 4.33 36.52
+ ID2= 2 (6102): 12.10 1.828 3.00 47.50
ID = 3 (0136): 21.10 1.870 3.00 42.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
1 + 2 = 3
ID1= 1 (0127): 34.70 2.515 3.00 43.44
+ ID2= 2 (0136): 21.10 1.870 3.00 42.82
ID = 3 (0128): 55.80 4.385 3.00 43.20

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
3 + 2 = 1
ID1= 3 (0128): 55.80 4.385 3.00 43.20
+ ID2= 2 (0603): 111.60 2.684 4.50 32.44
ID = 1 (0128): 167.40 5.117 3.00 36.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (1414.9)
Distance Elevation Manning
0.00 86.75 0.0900
3.09 87.40 0.0900
18.33 87.41 0.0900
35.33 86.99 0.0900
73.84 86.75 0.0900
103.33 86.41 0.0900
120.33 86.11 0.0900
129.46 86.13 0.0900
143.37 85.32 0.0900
154.33 85.02 0.0900
161.57 85.09 0.0900
163.05 84.78 0.0900 /0.0700 Main Channel
166.55 83.78 0.0700 Main Channel
168.05 84.78 0.0700 /0.1100 Main Channel
172.02 85.29 0.1100
191.39 86.19 0.1100
270.18 85.78 0.1100
296.33 86.36 0.1100
324.34 86.68 0.1100
368.56 87.05 0.1100

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.17 83.95 .465E+02 0.0 0.03 432.88
0.33 84.11 .186E+03 0.0 0.04 272.70
0.50 84.28 .418E+03 0.0 0.05 208.11
0.67 84.45 .743E+03 0.1 0.06 171.79
0.83 84.61 .116E+04 0.1 0.08 148.04
1.00 84.78 .167E+04 0.2 0.09 131.10
1.20 84.98 .252E+04 0.4 0.10 110.62

1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph <---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.40	5.12	3.00	2.35	0.08
OUTFLOW: ID= 1 (0604)	167.40	3.10	4.75	2.07	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB					
NASHYD (6041)	Area (ha)=	1.70	Curve Number (CN)=	79.0	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	4.12			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22
0.167	3.68	1.667	9.19	3.167	20.22
0.250	3.68	1.750	9.19	3.250	20.22
0.333	3.68	1.833	9.19	3.333	20.22
0.417	3.68	1.917	9.19	3.417	20.22
0.500	3.68	2.000	9.19	3.500	20.22
0.583	5.51	2.083	11.03	3.583	9.19
0.667	5.51	2.167	11.03	3.667	9.19
0.750	5.51	2.250	11.03	3.750	9.19
0.833	5.51	2.333	11.03	3.833	9.19
0.917	5.51	2.417	11.03	3.917	9.19
1.000	5.51	2.500	11.03	4.000	9.19
1.083	5.51	2.583	55.14	4.083	7.35
1.167	5.51	2.667	55.14	4.167	7.35
1.250	5.51	2.750	99.25	4.250	7.35

1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.028 (i)
TIME TO PEAK (hrs)= 7.500
RUNOFF VOLUME (mm)= 46.483
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.506

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (6042)	Area (ha)=	22.30	Dir. Conn.(%)=	53.00	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00			

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	14.49		7.81
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	385.57		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68

1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	142.59
over (min)	5.00	15.00
Storage Coeff. (min)=	4.97 (ii)	12.51 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. Tpeak (cms)=	0.22	0.08
TOTALS		
PEAK FLOW (cms)=	4.48	1.88
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	54.22
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (6041):	1.70	0.028	7.50	46.48	
+ ID2= 2 (6042):	22.30	6.101	3.00	71.01	
ID = 3 (0129):	24.00	6.101	3.00	69.27	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0129):	24.00	6.101	3.00	69.27	
+ ID2= 2 (0604):	167.40	3.104	4.75	36.02	
ID = 3 (0130):	191.40	7.539	3.00	40.19	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)					
IN= 2----> OUT= 1	Routing time step (min)=	5.00			

<----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning	
0.00	82.95	0.1100	
3.78	82.95	0.1100	
9.24	82.49	0.1100	
50.67	82.10	0.1100	
105.12	82.17	0.1100	
119.34	81.56	0.1100	
150.67	81.66	0.1100	
157.23	82.37	0.1100	
190.03	82.57	0.1100	
223.75	82.27	0.1100	
252.32	82.50	0.1100	
254.65	81.95	0.1100 / 0.0700	Main Channel
258.15	80.95	0.0700	Main Channel
259.65	81.95	0.0700 / 0.1100	Main Channel
263.15	82.90	0.1100	
278.14	82.80	0.1100	
282.35	81.68	0.1100	
285.02	82.19	0.1100	
336.56	82.53	0.1100	
404.40	82.68	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.66
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph <---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)

INFLOW : ID= 2 (0130) 191.40 7.54 3.00 40.19 1.09 0.37
OUTFLOW: ID= 1 (0605) 191.40 3.52 3.58 40.19 0.92 0.30

CALIB
NASHYD (6111) Area (ha)= 0.60 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.08

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.027 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 44.055
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.479

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

STANDHYD (6112) Area (ha)= 10.80
ID= 1 DT= 5.0 min Total Imp(%)= 62.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 6.70 4.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 268.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 127.22
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.00 (ii) 11.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.09
TOTALS
PEAK FLOW (cms)= 2.09 0.89 2.849 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 49.05 67.47
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.53 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6111):	0.60	0.027	4.08	44.05
+ ID2= 2 (6112):	10.80	2.849	3.00	67.47
ID = 3 (0137):	11.40	2.854	3.00	66.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0137):	11.40	2.854	3.00	66.24
+ ID2= 2 (0605):	191.40	3.519	3.58	40.19
ID = 3 (0139):	202.80	5.306	3.00	41.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6051) Area (ha)= 0.40 Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.31

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68

0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 32.772
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.357

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6052) Area (ha)= 15.50
ID= 1 DT= 5.0 min Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.23 5.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 321.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68

0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	108.20	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.46 (ii)	12.88 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.23	0.08	
TOTALS			
PEAK FLOW (cms)=	3.21	0.92	3.982 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	40.47	65.00
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.44	0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0051):	0.40	0.012	4.42	32.77
+ ID2= 2 (0052):	15.50	3.982	3.00	65.00
=====				
ID = 3 (0131):	15.90	3.983	3.00	64.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0131):	15.90	3.983	3.00	64.19
+ ID2= 2 (0139):	202.80	5.306	3.00	41.65
=====				

ID = 3 (0132): 218.70 9.289 3.00 43.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0530)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (350.0) ----->			
Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 /0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 /0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80

2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ---->					<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.70	9.29	3.00	43.29	0.80	0.74
OUTFLOW: ID= 1 (0530)	218.70	7.25	3.08	43.29	0.71	0.71

CALIB					
STANDHYD (5302)	Area (ha)=	5.80			
ID= 1 DT= 5.0 min	Total Imp(%)=	60.00	Dir. Conn.(%)=	48.00	

			IMPERVIOUS		PERVIOUS (i)
Surface Area	(ha)=	3.48	2.32		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	196.64	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	101.50	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.32 (ii)	11.96 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.26	0.09	
TOTALS			
PEAK FLOW (cms)=	1.09	0.39	1.419 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	39.44	61.74
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.43	0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.70	7.250	3.08	43.29
+ ID2= 2 (5302):	5.80	1.419	3.00	61.74
=====				
ID = 3 (0134):	224.50	8.066	3.00	43.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	273.90	13.408	3.08	44.28
+ ID2= 2 (0134):	224.50	8.066	3.00	43.77
=====				
ID = 3 (0135):	498.40	21.413	3.08	44.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0507)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning		
0.00	79.36	0.0900		
7.45	79.32	0.0900		
13.77	79.27	0.0900		
20.24	79.24	0.0900		
27.28	79.26	0.0900		
34.16	79.13	0.0900		
40.79	79.05	0.0900		
47.58	79.05	0.0900		
54.30	79.07	0.0900		
60.87	79.24	0.0900		
71.39	79.48	0.0900		
73.53	78.96	0.0900		
76.96	78.07	0.0900		
82.21	77.08	0.0900 / 0.0700	Main Channel	
85.82	76.28	0.0700	Main Channel	
89.97	76.89	0.0700	Main Channel	
91.35	77.38	0.0700 / 0.0900	Main Channel	
95.27	78.68	0.0900		
98.44	79.63	0.0900		
102.89	79.89	0.0900		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->		<-pipe / channel->	
AREA	QPEAK	R.V.	MAX DEPTH
(ha)	(cms)	(hrs)	(m)
INFLOW : ID= 2 (0135)	498.40	21.41	3.08
OUTFLOW: ID= 1 (0507)	498.40	18.17	3.33
			44.05
			2.20
			0.93
			2.05
			0.89

CALIB				
NASHYD (5071)	Area	(ha)= 8.40	Curve Number (CN)= 74.0	
ID= 1 DT= 5.0 min	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	1.72		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.245 (i)
TIME TO PEAK (hrs)= 4.917
RUNOFF VOLUME (mm)= 40.655
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.442

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (5072)	Area	(ha)= 40.50		
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	30.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.23	22.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Lengths (m)=	519.62	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Max.Eff.Inten.(mm/hr)=	143.36	118.43
over (min)	5.00	15.00
Storage Coeff. (min)=	5.95 (ii)	14.07 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.19	0.08
		TOTALS
PEAK FLOW (cms)=	4.50	4.16
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	47.07
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.51
		0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0071):	8.40	0.245	4.92	40.65
+ ID2= 2 (0072):	40.50	8.002	3.00	58.72
ID = 3 (0121):	48.90	8.023	3.00	55.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0122)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0121):	48.90	8.023	3.00	55.61
+ ID2= 2 (0007):	498.40	18.167	3.33	44.05
ID = 3 (0122):	547.30	22.836	3.17	45.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)	AREA	(ha)= 253.60
ID= 1 DT= 5.0min	QPEAK	(cms)= 0.78
	TPEAK	(hrs)= 15.58
	VOLUME	(mm)= 47.57

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17

17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12

22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11

26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.11
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.11
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10

19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.65	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13

23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11

27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.1		

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.26	1.50	5.65	3.00	12.43	4.50	3.39
0.17	2.26	1.67	5.65	3.17	12.43	4.67	3.39
0.33	2.26	1.83	5.65	3.33	12.43	4.83	3.39
0.50	3.39	2.00	6.78	3.50	5.65	5.00	2.26
0.67	3.39	2.17	6.78	3.67	5.65	5.17	2.26
0.83	3.39	2.33	6.78	3.83	5.65	5.33	2.26
1.00	3.39	2.50	33.90	4.00	4.52	5.50	2.26
1.17	3.39	2.67	61.02	4.17	4.52	5.67	2.26
1.33	3.39	2.83	88.14	4.33	4.52	5.83	2.26

CALIB			
NASHYD (5011)	Area (ha)= 80.20	Curve Number (CN)= 65.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.85		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.208 (i)
TIME TO PEAK (hrs)= 3.917
TOTAL RAINFALL (mm)= 12.696
TOTAL RAINFALL (mm)= 56.500

RUNOFF COEFFICIENT = 0.225

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5012)	Area (ha)= 39.40		
ID= 1 DT= 5.0 min	Total Imp(%)= 38.00	Dir. Conn.(%)= 24.00	

	IMPERVIOUS (i)	PERVIOUS (i)
Surface Area (ha)=	14.97	24.43
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	512.51	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	31.75
over (min)	5.00	25.00
Storage Coeff. (min)=	7.16 (ii)	20.91 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.17	0.05
		TOTALS
PEAK FLOW (cms)=	2.08	1.06
TIME TO PEAK (hrs)=	3.00	3.33
		2.636 (iii)
		3.00

RUNOFF VOLUME (mm)= 50.50 15.46 23.87
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.27 0.42

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)			
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)
ID1= 1 (5011):	80.20	1.208	3.92
+ ID2= 2 (5012):	39.40	2.636	3.00
			12.70
			23.87
ID = 3 (0100):	119.60	2.865	3.00
			16.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.494E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0100)	119.60	2.86	3.00	16.38	0.96	0.87
OUTFLOW: ID= 1 (0502)	119.60	2.02	3.58	16.37	0.81	0.80

CALIB			
NASHYD (5021)	Area (ha)= 25.20	Curve Number (CN)= 62.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.46		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39

0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.662

PEAK FLOW (cms)= 0.230 (i)
TIME TO PEAK (hrs)= 4.750
RUNOFF VOLUME (mm)= 11.520
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5022)
ID= 1 DT= 5.0 min
Area (ha)= 25.90
Total Imp(%)= 42.00 Dir. Conn.(%)= 30.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.88 15.02
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 415.53 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26

0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 27.97
over (min) 5.00 25.00
Storage Coeff. (min)= 6.32 (ii) 20.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

TOTALS

PEAK FLOW (cms)= 1.75 0.57 2.049 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 13.91 24.88
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.25 0.44

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0101)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (05021): 25.20 0.230 4.75 11.52
+ ID2= 2 (05022): 25.90 2.049 3.00 24.88
===== ID = 3 (0101): 51.10 2.066 3.00 18.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0101): 51.10 2.066 3.00 18.29

+ ID2= 2 (0502): 119.60 2.022 3.58 16.37
===== ID = 3 (0102): 170.70 3.272 3.00 16.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00
<----- DATA FOR SECTION (1157.9) ----->
Distance Elevation Manning
0.00 86.78 0.0900
25.34 87.17 0.0900
68.44 87.04 0.0900
117.13 86.81 0.0900
125.36 85.21 0.0900 /0.0700 Main Channel
127.36 84.21 0.0700 Main Channel
128.86 84.21 0.0700 Main Channel
130.86 85.21 0.0700 /0.0900 Main Channel
131.88 86.36 0.0900
140.63 86.77 0.0900
168.26 86.90 0.0900
169.81 87.10 0.0900
202.11 87.50 0.0900
239.06 87.35 0.0900
270.29 87.83 0.0900
283.90 87.90 0.0900
297.51 87.86 0.0900
324.73 87.89 0.0900
351.95 87.78 0.0900
388.59 87.46 0.0900

----- TRAVEL TIME TABLE -----						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.17	84.38	.114E+03	0.1	0.34	18.34	
0.33	84.54	.269E+03	0.4	0.50	12.51	
0.50	84.71	.465E+03	0.8	0.62	10.07	
0.67	84.88	.703E+03	1.4	0.72	8.63	
0.83	85.04	.982E+03	2.1	0.81	7.65	
1.00	85.21	.130E+04	3.1	0.89	6.93	
1.21	85.42	.177E+04	5.0	1.06	5.87	
1.41	85.62	.234E+04	7.4	1.17	5.28	
1.62	85.83	.300E+04	10.2	1.27	4.89	
1.83	86.04	.376E+04	13.6	1.35	4.60	
2.03	86.24	.462E+04	17.6	1.42	4.37	
2.24	86.45	.560E+04	22.1	1.47	4.22	
2.45	86.66	.695E+04	27.6	1.48	4.20	
2.66	86.87	.925E+04	31.2	1.25	4.94	

2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0102) 170.70 3.27 3.00 16.95 1.02 0.91
OUTFLOW: ID= 1 (0503) 170.70 2.85 3.08 16.95 0.95 0.87

CALIB
NASHYD (5031)
ID= 1 DT= 5.0 min
U.H. Tp(hrs)= 0.82
Area (ha)= 1.70
Ia (mm)= 8.00
Curve Number (CN)= 71.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.079

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 3.833

RUNOFF VOLUME (mm)= 15.449
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.273

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 12.20
Total Imp(%)= 59.00 Dir. Conn.(%)= 47.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 7.20 5.00
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 285.19 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 42.47
over (min)= 5.00 20.00
Storage Coeff. (min)= 5.04 (ii) 17.28 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS

PEAK FLOW (cms)= 1.34 0.33 1.556 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 19.39 34.01
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.34 0.60

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0103)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0103):	1.70	0.032	3.83	15.45
+ ID2= 2 (0103):	12.20	1.556	3.00	34.01
ID = 3 (0103):	13.90	1.562	3.00	31.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0104)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0103):	13.90	1.562	3.00	31.74
+ ID2= 2 (0103):	170.70	2.855	3.08	16.95
ID = 3 (0104):	184.60	4.058	3.00	18.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) -----

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900

217.10	82.90	0.0900	
229.61	83.66	0.0900 /0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

----- hydrograph ----- <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0104)	184.60	4.06	3.00	18.06	0.70	0.32
OUTFLOW: ID= 1 (0504)	184.60	3.25	3.50	18.06	0.67	0.31

CALIB
NASHYD (5041)

Area (ha)= 0.30 Curve Number (CN)= 68.0

Unit Hyd Qpeak (cms)= 0.013
PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 13.992
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.248

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min

Area (ha)= 7.40
Total Imp(%)= 66.00 Dir. Conn.(%)= 54.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.88 2.52
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 222.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 42.02
over (min) 5.00 20.00
Storage Coeff. (min)= 4.34 (ii) 16.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06

PEAK FLOW (cms)= 0.95 0.17 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 1.057 (iii)
RUNOFF VOLUME (mm)= 50.50 18.42 35.74
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0105)|

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5041):	0.30	0.005	3.92	13.99
+ ID2= 2 (5042):	7.40	1.057	3.00	35.74
=====				
ID = 3 (0105):	7.70	1.058	3.00	34.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0105):	7.70	1.058	3.00	34.89
+ ID2= 2 (0504):	184.60	3.255	3.50	18.06
=====				
ID = 3 (0106):	192.30	3.505	3.42	18.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)	(ha)=	22.80	Curve Number (CN)= 72.0
NASHYD (5201)	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=		1.31	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26

1.500 3.39 | 3.000 88.14 | 4.500 4.52 | 6.00 2.26

Unit Hyd Qpeak (cms)= 0.663

PEAK FLOW (cms)= 0.314 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 15.971
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.283

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	6.90	Total Imp(%)=	23.00	Dir. Conn.(%)=	12.00
STANDHYD (5202)						
ID= 1 DT= 5.0 min						

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.59 5.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 214.48 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 34.94
over (min) 5.00 20.00
Storage Coeff. (min)= 4.25 (ii) 17.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.06
PEAK FLOW (cms)= 0.20 0.29 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.25 0.383 (iii)
RUNOFF VOLUME (mm)= 50.50 18.03 3.00
TOTAL RAINFALL (mm)= 56.50 56.50 21.92
RUNOFF COEFFICIENT = 0.89 0.32 56.50 0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5201):	22.80	0.314	4.50	15.97
+ ID2= 2 (5202):	6.90	0.383	3.00	21.92
=====				
ID = 3 (0111):	29.70	0.415	3.25	17.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0521)	Routing time step (min)'= 5.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900 /0.0700	Main Channel
513.93	82.96	0.0700	Main Channel
526.85	83.23	0.0700 /0.0900	Main Channel
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.05	83.00	.378E+02	0.0	0.11	83.81		
0.09	83.05	.151E+03	0.0	0.17	52.79		
0.14	83.09	.340E+03	0.1	0.22	40.29		
0.18	83.14	.605E+03	0.3	0.27	33.26		
0.23	83.18	.946E+03	0.5	0.32	28.66		
0.27	83.23	.151E+04	0.9	0.33	27.77		
0.32	83.27	.323E+04	1.8	0.31	29.51		
0.37	83.32	.510E+04	3.2	0.34	26.44		
0.42	83.37	.713E+04	5.0	0.38	23.61		
0.46	83.42	.934E+04	7.3	0.42	21.44		
0.51	83.47	.121E+05	10.0	0.45	20.23		
0.56	83.52	.156E+05	13.4	0.47	19.44		
0.61	83.57	.196E+05	17.7	0.49	18.52		
0.66	83.61	.240E+05	22.8	0.52	17.49		
0.71	83.66	.286E+05	28.4	0.54	16.75		
0.75	83.71	.336E+05	34.7	0.56	16.14		
0.80	83.76	.390E+05	41.8	0.58	15.55		
0.85	83.81	.448E+05	49.8	0.60	14.99		
0.90	83.86	.510E+05	58.8	0.63	14.46		

<---- hydrograph ---->				<- pipe / channel ->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0111)	29.70	0.41	3.25	17.35	0.20	0.29
OUTFLOW: ID= 1 (0521)	29.70	0.37	4.58	17.34	0.19	0.28

CALIB			
NASHYD (5211)	Area (ha)= 1.90	Curve Number (CN)= 77.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39

0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	48.55	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.23 (ii)	16.83 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.21	0.06	

PEAK FLOW (cms)=	1.28	0.51	1.624 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	22.65	33.79
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.40	0.60

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0112)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (5211):	1.90	0.040	4.00
+ ID2= 2 (5212):	13.80	1.624	3.00
ID = 3 (0112):	15.70	1.631	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0113)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0112):	15.70	1.631	3.00
+ ID2= 2 (0521):	29.70	0.368	4.58

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.076

PEAK FLOW (cms)= 0.040 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 18.912
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.335

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5212)	Area (ha)= 13.80		
ID= 1 DT= 5.0 min	Total Imp(%)= 52.00	Dir. Conn.(%)= 40.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	7.18	6.62
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26

ID = 3 (0113): 45.40 1.747 3.00 22.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0106):	192.30	3.505	3.42
+ ID2= 2 (0113):	45.40	1.747	3.00
ID = 3 (0114):	237.70	4.980	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)			
IN= 2----> OUT= 1	Routing time step (min)'= 5.00		

<----- DATA FOR SECTION (553.6) ----->			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 /0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 /0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70

0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<--- hydrograph --->			<-pipe / channel-->		
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0114)	237.70	4.98	3.00	19.44	0.49
OUTFLOW: ID= 1 (0505)	237.70	4.48	3.08	19.44	0.40

CALIB			
NASHYD (5051)	Area (ha)= 1.30	Curve Number (CN)= 68.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.62		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.080

PEAK FLOW (cms)= 0.027 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 13.998
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.248

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5052)	Area (ha)= 14.60		
ID= 1 DT= 5.0 min	Total Imp(%)= 66.00	Dir. Conn.(%)= 54.00	

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)= 9.64		4.96		
Dep. Storage	(mm)= 6.00		8.00		
Average Slope	(%)= 1.00		1.00		
Length	(m)= 311.98		40.00		
Mannings n	= 0.013		0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26

1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	42.02	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.32 (ii)	17.61 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.21	0.06	
		TOTALS	
PEAK FLOW (cms)=	1.82	0.32	2.038 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	18.42	35.74
TOTAL RAINFALL (mm)=	56.50	56.50	
RUNOFF COEFFICIENT =	0.89	0.33	0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0107)			
1 + 2 = 3			
ID1= 1 (0501):	AREA (ha)= 1.30	QPEAK (cms)= 0.027	TPEAK (hrs)= 3.58
+ ID2= 2 (0502):	AREA (ha)= 14.60	QPEAK (cms)= 2.038	TPEAK (hrs)= 3.00
ID = 3 (0107):	AREA (ha)= 15.90	QPEAK (cms)= 2.046	TPEAK (hrs)= 3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0108)			
1 + 2 = 3			
ID1= 1 (0107):	AREA (ha)= 15.90	QPEAK (cms)= 2.046	TPEAK (hrs)= 3.00
+ ID2= 2 (0505):	AREA (ha)= 237.70	QPEAK (cms)= 4.477	TPEAK (hrs)= 3.08
ID = 3 (0108):	AREA (ha)= 253.60	QPEAK (cms)= 5.957	TPEAK (hrs)= 3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (304.1) ----->				
Distance	Elevation	Manning		
0.00	81.42	0.0900		
7.45	81.36	0.0900		
32.34	80.38	0.0900		
45.97	80.05	0.0900		
65.23	79.93	0.0900		
84.49	80.35	0.0900		
113.49	80.02	0.0900		
136.48	80.07	0.0900		
188.81	79.81	0.0900		
197.86	79.25	0.0900 / 0.0700	Main Channel	
200.70	78.22	0.0700	Main Channel	
203.29	79.35	0.0700 / 0.0900	Main Channel	
204.01	79.67	0.0900		
236.47	80.40	0.0900		
277.80	80.48	0.0900		
305.35	80.37	0.0900		
346.67	80.41	0.0900		
387.99	80.33	0.0900		
415.54	80.53	0.0900		
447.88	80.49	0.0900		

----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<--- hydrograph ---> <-pipe / channel-->

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.60 5.96 3.00 20.35 1.32 1.17
OUTFLOW: ID= 1 (0506) 253.60 5.67 3.08 20.35 1.30 1.17

CALIB
NASHYD (5061) Area (ha)= 3.90 Curve Number (CN)= 71.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.62

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 0.239

PEAK FLOW (cms)= 0.090 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 15.450
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.273

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5062) Area (ha)= 7.80
ID= 1 DT= 5.0 min Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.07 2.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 228.04 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 45.50
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.41 (ii) 16.31 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06

PEAK FLOW (cms)= 0.98 0.20 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 1.110 (iii)
RUNOFF VOLUME (mm)= 50.50 19.99 36.16
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.35 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0109)
1 + 2 = 3
ID1= 1 (5061): 3.90 0.090 3.58 15.45
+ ID2= 2 (0506): 7.80 1.110 3.00 36.16
=====

ID = 3 (0109): 11.70 1.138 3.00 29.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0110)
1 + 2 = 3
ID1= 1 (0109): 11.70 1.138 3.00 29.26
+ ID2= 2 (0506): 253.60 5.670 3.08 20.35
=====

ID = 3 (0110): 265.30 6.297 3.08 20.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (5101) Area (ha)= 0.80 Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.42

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39

CALIB
STANDHYD (5102) Area (ha)= 0.90
ID= 1 DT= 5.0 min Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.45 0.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26

0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 36.65
over (min) 5.00 20.00
Storage Coeff. (min)= 2.31 (ii) 15.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.07

TOTALS
PEAK FLOW (cms)= 0.08 0.03 0.095 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 16.79 28.58
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0115)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5101):	0.80	0.008	4.67	13.11
+ ID2= 2 (5102):	0.90	0.095	3.00	28.58
=====				
ID = 3 (0115):	1.70	0.096	3.00	21.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->
Distance Elevation Manning

0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ---->				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0115)	1.70	0.10	3.00	21.30
OUTFLOW: ID= 1 (0511)	1.70	0.07	3.08	21.30

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.129

PEAK FLOW (cms)= 0.041 (i)
TIME TO PEAK (hrs)= 3.583
RUNOFF VOLUME (mm)= 13.548
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.240

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 85.63 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 42.91
over (min) 5.00 15.00
Storage Coeff. (min)= 2.45 (ii) 14.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS
PEAK FLOW (cms)= 0.09 0.04 0.127 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 19.48 30.33
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.34 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0116)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5111):	1.90	0.041	3.58	13.55
+ ID2= 2 (5112):	1.10	0.127	3.00	30.33

=====

ID = 3 (0116): 3.00 0.142 3.00 19.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0117) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0116):	3.00	0.142	3.00	19.70
+ ID2= 2 (0511):	1.70	0.068	3.00	21.30

=====

ID = 3 (0117): 4.70 0.210 3.00 20.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0512) |

| IN= 2--> OUT= 1 |

Routing time step (min)= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning	
0.00	80.80	0.0900	
9.73	80.46	0.0900	
14.10	82.04	0.0900	
17.18	82.28	0.0900	
41.13	82.12	0.0900 / 0.0700	Main Channel
46.88	79.71	0.0700	Main Channel
51.41	80.90	0.0700 / 0.0900	Main Channel
94.29	80.56	0.0900	
175.64	80.72	0.0900	
192.09	80.85	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90

TIME TO PEAK (hrs)= 4.250

RUNOFF VOLUME (mm)= 15.447

TOTAL RAINFALL (mm)= 56.500

RUNOFF COEFFICIENT = 0.273

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

| STANDHYD (5122) |

| ID= 1 DT= 5.0 min |

	Area (ha)=	3.20
Total Imp(%)=	60.00	Dir. Conn.(%)= 47.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.92	1.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	146.06	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 44.41

over (min) 5.00 20.00

Storage Coeff. (min)= 3.37 (ii) 15.39 (ii)

Unit Hyd. Tpeak (min)= 5.00 20.00

Unit Hyd. peak (cms)= 0.26 0.07

1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0117)	4.70	0.21	3.00	20.28	0.45	0.32
OUTFLOW: ID= 1 (0512)	4.70	0.11	3.33	20.27	0.35	0.27

| CALIB |

| NASHYD (5121) |

| ID= 1 DT= 5.0 min |

	Area (ha)=	0.70	Curve Number (CN)=	71.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
U.H. Tp(hrs)=	1.14			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.023

PEAK FLOW (cms)= 0.010 (i)

PEAK FLOW (cms)= 0.36 0.09 *TOTALS*

TIME TO PEAK (hrs)= 3.00 3.17 0.425 (iii)

RUNOFF VOLUME (mm)= 50.50 19.78 34.21

TOTAL RAINFALL (mm)= 56.50 56.50 56.50

RUNOFF COEFFICIENT = 0.89 0.35 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0118) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5121):	0.70	0.010	4.25	15.45
+ ID2= 2 (5122):	3.20	0.425	3.00	34.21

=====

ID = 3 (0118): 3.90 0.427 3.00 30.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0119) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0118):	3.90	0.427	3.00	30.84
+ ID2= 2 (0512):	4.70	0.115	3.33	20.27

=====

ID = 3 (0119): 8.60 0.513 3.00 25.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0120) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0110):	265.30	6.297	3.08	20.74
+ ID2= 2 (0119):	8.60	0.513	3.00	25.07

=====

ID = 3 (0120): 273.90 6.640 3.00 20.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6011)
ID= 1 DT= 5.0 min

Area (ha)= 44.10
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.83

Curve Number (CN)= 62.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.608 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6012)
ID= 1 DT= 5.0 min

Area (ha)= 11.00
Total Imp(%)= 28.00
Dir. Conn.(%)= 16.00

IMPERVIOUS PERVIOUS (i)

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6011):	44.10	0.608	3.92	11.52
+ ID2= 2 (6012):	11.00	0.600	3.00	19.39
=====				
ID = 3 (0124):	55.10	0.784	3.50	13.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021)
ID= 1 DT= 5.0 min

Area (ha)= 43.60
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.95

Curve Number (CN)= 62.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.545 (i)

Surface Area (ha)= 3.08
Dep. Storage (mm)= 6.00
Average Slope (%)= 1.00
Length (m)= 270.80
Mannings n = 0.013

7.92
8.00
1.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14
over (min)= 5.00
Storage Coeff. (min)= 4.88 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.22

26.15
20.00
19.74 (ii)
20.00
0.06

TOTALS
0.600 (iii)
3.00
19.39
56.50
0.34

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING: FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min

Area (ha)= 12.90
Total Imp(%)= 35.00
Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 4.51
Dep. Storage (mm)= 6.00
Average Slope (%)= 1.00
Length (m)= 293.26
Mannings n = 0.013

8.38
8.00
1.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14
over (min)= 5.00
Storage Coeff. (min)= 5.12 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.21

26.96
20.00
19.80 (ii)
20.00
0.06

TOTALS
PEAK FLOW (cms)= 0.69 0.33 0.896 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.66 22.13
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.39

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3
ID1= 1 (0021): 43.60 0.545 4.00 11.52
+ ID2= 2 (0022): 12.90 0.896 3.00 22.13
ID = 3 (0125): 56.50 0.981 3.00 13.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3
ID1= 1 (0124): 55.10 0.784 3.50 13.09
+ ID2= 2 (0125): 56.50 0.981 3.00 13.94
ID = 3 (0126): 111.60 1.699 3.00 13.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0003)
IN= 2--> OUT= 1 | Routing time step (min)= 5.00

DATA FOR SECTION (2135.9) -----
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400

86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700 Main Channel
130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

hydrograph
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 1.70 3.00 13.52 0.57 0.21
OUTFLOW: ID= 1 (0003) 111.60 1.06 4.67 13.52 0.53 0.20

CALIB

NASHYD (6031) Area (ha)= 19.00 Curve Number (CN)= 72.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.32

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 0.550

PEAK FLOW (cms)= 0.261 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 15.971
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.283

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6032) Area (ha)= 15.70
ID= 1 DT= 5.0 min Total Imp(%)= 28.00 Dir. Conn.(%)= 15.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.40 11.30
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 37.12
over (min)= 5.00 20.00
Storage Coeff. (min)= 5.44 (ii) 18.35 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

TOTALS
PEAK FLOW (cms)= 0.54 0.63 0.956 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 18.53 23.33
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.41

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (6102)	Area (ha)= 12.10	
ID= 1 DT= 5.0 min	Total Imp(%)= 27.00	Dir. Conn.(%)= 16.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.27	8.83
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	284.02	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39	0.167	2.26	1.667	5.65
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39	0.250	2.26	1.750	5.65
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39	0.333	2.26	1.833	5.65
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39	0.417	2.26	1.917	5.65
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39	0.500	2.26	2.000	5.65
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39	0.583	3.39	2.083	6.78
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26	0.667	3.39	2.167	6.78
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26	0.750	3.39	2.250	6.78
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26	0.833	3.39	2.333	6.78
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26	0.917	3.39	2.417	6.78
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26	1.000	3.39	2.500	6.78
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26	1.083	3.39	2.583	33.90
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26	1.167	3.39	2.667	33.90
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26	1.250	3.39	2.750	61.02
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26	1.333	3.39	2.833	61.02
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26	1.417	3.39	2.917	88.14
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26	1.500	3.39	3.000	88.14
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26				

Max.Eff.Inten.(mm/hr)=	88.14	33.10
over (min)	5.00	20.00
Storage Coeff. (min)=	5.03 (ii)	18.55 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.21	0.06
		TOTALS
PEAK FLOW (cms)=	0.45	0.44
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	50.50	17.03
TOTAL RAINFALL (mm)=	56.50	56.50

Unit Hyd Qpeak (cms)= 0.279

PEAK FLOW (cms)= 0.121 (i)
TIME TO PEAK (hrs)= 4.417
RUNOFF VOLUME (mm)= 14.948
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.265

RUNOFF COEFFICIENT = 0.89 0.30 0.40

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0136)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6101):	9.00	0.121	4.42	14.95
+ ID2= 2 (6102):	12.10	0.733	3.00	22.38
ID = 3 (0136):	21.10	0.746	3.00	19.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0127):	34.70	0.981	3.00	19.30
+ ID2= 2 (0136):	21.10	0.746	3.00	19.21
ID = 3 (0128):	55.80	1.727	3.00	19.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	55.80	1.727	3.00	19.27
+ ID2= 2 (0603):	111.60	1.061	4.67	13.52
ID = 1 (0128):	167.40	2.035	3.00	15.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)

IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->											
Distance	Elevation	Manning									
0.00	86.75	0.0900									
3.09	87.40	0.0900									
18.33	87.41	0.0900									
35.33	86.99	0.0900									
73.84	86.75	0.0900									
103.33	86.41	0.0900									
120.33	86.11	0.0900									
129.46	86.13	0.0900									
143.37	85.32	0.0900									
154.33	85.02	0.0900									
161.57	85.09	0.0900									
163.05	84.78	0.0900 / 0.0700	Main Channel								
166.55	83.78	0.0700	Main Channel								
168.05	84.78	0.0700 / 0.1100	Main Channel								
172.02	85.29	0.1100									
191.39	86.19	0.1100									
270.18	85.78	0.1100									
296.33	86.36	0.1100									
324.34	86.68	0.1100									
368.56	87.05	0.1100									

TRAVEL TIME TABLE											
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME						
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)						
0.17	83.95	.465E+02	0.0	0.03	432.88						
0.33	84.11	.186E+03	0.0	0.04	272.70						
0.50	84.28	.418E+03	0.0	0.05	208.11						
0.67	84.45	.743E+03	0.1	0.06	171.79						
0.83	84.61	.116E+04	0.1	0.08	148.04						
1.00	84.78	.167E+04	0.2	0.09	131.10						
1.20	84.98	.252E+04	0.4	0.10	110.62						
1.41	85.19	.469E+04	0.6	0.09	121.59						
1.61	85.39	.842E+04	1.1	0.09	126.63						
1.81	85.59	.133E+05	1.8	0.09	121.99						
2.01	85.79	.192E+05	2.7	0.10	116.68						
2.22	86.00	.298E+05	4.0	0.09	125.45						
2.42	86.20	.487E+05	5.6	0.08	143.80						
2.62	86.40	.736E+05	9.0	0.08	137.02						
2.82	86.60	.102E+06	13.1	0.09	130.82						
3.03	86.81	.136E+06	18.1	0.09	125.42						
3.23	87.01	.178E+06	24.4	0.09	121.07						
3.43	87.21	.224E+06	34.2	0.10	108.80						
3.63	87.41	.271E+06	44.8	0.11	100.89						

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0128) 167.40 2.03 3.00 15.43 1.86 0.09
OUTFLOW: ID= 1 (0604) 167.40 1.26 4.83 15.42 1.65 0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
NASHYD (6041) | Area (ha)= 1.70 Curve Number (CN)= 79.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 4.12

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 0.016

PEAK FLOW (cms)= 0.012 (i)
TIME TO PEAK (hrs)= 7.583
RUNOFF VOLUME (mm)= 20.270
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.359

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6042) | Area (ha)= 22.30
ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 53.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.49 7.81
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 385.57 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 58.52
over (min)= 5.00 20.00
Storage Coeff. (min)= 6.04 (ii) 16.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.06

TOTALS
PEAK FLOW (cms)= 2.69 0.73 3.189 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 25.34 38.67
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.45 0.68

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0129)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0041): 1.70 0.012 7.58 20.27
+ ID2= 2 (0042): 22.30 3.189 3.00 38.67
ID = 3 (0129): 24.00 3.189 3.00 37.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0130)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0129): 24.00 3.189 3.00 37.37
+ ID2= 2 (0604): 167.40 1.259 4.83 15.42
ID = 3 (0130): 191.40 3.765 3.00 18.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)
IN= 2---> OUT= 1
Routing time step (min)= 5.00

----- DATA FOR SECTION (801.4) -----
Distance Elevation Manning
0.00 82.95 0.1100
3.78 82.95 0.1100
9.24 82.49 0.1100
50.67 82.10 0.1100
105.12 82.17 0.1100
119.34 81.56 0.1100
150.67 81.66 0.1100
157.23 82.37 0.1100
190.03 82.57 0.1100
223.75 82.27 0.1100
252.32 82.50 0.1100
254.65 81.95 0.1100 /0.0700 Main Channel
258.15 80.95 0.0700 Main Channel

259.65 81.95 0.0700 /0.1100 Main Channel
263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.08 81.03 .125E+02 0.0 0.11 104.30
0.17 81.12 .499E+02 0.0 0.18 65.70
0.25 81.20 .112E+03 0.0 0.24 50.14
0.33 81.28 .199E+03 0.1 0.29 41.39
0.42 81.37 .312E+03 0.1 0.34 35.67
0.50 81.45 .449E+03 0.2 0.38 31.59
0.58 81.53 .611E+03 0.4 0.42 28.50
0.67 81.62 .117E+04 0.5 0.33 36.11
0.75 81.70 .316E+04 1.1 0.24 49.12
0.83 81.78 .560E+04 2.1 0.27 45.15
0.92 81.87 .827E+04 3.4 0.30 40.03
1.00 81.95 .112E+05 5.2 0.33 35.88
1.10 82.05 .151E+05 8.0 0.38 31.68
1.21 82.16 .207E+05 8.8 0.30 39.37
1.31 82.26 .306E+05 14.0 0.33 36.36
1.41 82.36 .433E+05 20.3 0.34 35.59
1.52 82.47 .606E+05 28.4 0.34 35.57
1.62 82.57 .828E+05 41.0 0.36 33.68
1.73 82.68 .109E+06 60.1 0.39 30.35

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0130) 191.40 3.76 3.00 18.18 0.93 0.30
OUTFLOW: ID= 1 (0605) 191.40 1.58 3.58 18.18 0.79 0.25

CALIB
NASHYD (6111) | Area (ha)= 0.60 Curve Number (CN)= 77.0
ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 1.08

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.021

PEAK FLOW (cms)= 0.011 (i)
TIME TO PEAK (hrs)= 4.167
RUNOFF VOLUME (mm)= 18.909
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.335

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	STANDHYD (6112)	Area (ha)= 10.80	Total Imp(%)= 62.00	Dir. Conn.(%)= 50.00
ID= 1 DT= 5.0 min				
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	6.70	4.10	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	268.33	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0139)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0137):	11.40	1.487	3.00	35.41
+ ID2= 2 (0605):	191.40	1.582	3.58	18.18
ID = 3 (0139):	202.80	2.589	3.00	19.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	NASHYD (6051)	Area (ha)= 0.40	Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 1.31		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.012

PEAK FLOW (cms)= 0.005 (i)
TIME TO PEAK (hrs)= 4.500
RUNOFF VOLUME (mm)= 13.108

0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 49.77
over (min) 5.00 20.00
Storage Coeff. (min)= 4.86 (ii) 16.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

PEAK FLOW (cms)= 1.26 0.33
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 50.50 22.15
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0137)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6111):	0.60	0.011	4.17	18.91
+ ID2= 2 (6112):	10.80	1.486	3.00	36.32
ID = 3 (0137):	11.40	1.487	3.00	35.41

TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.232

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6052)		Area (ha)=	15.50	
ID= 1 DT= 5.0 min		Total Imp(%)=	66.00	Dir. Conn.(%)= 54.00
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	10.23	5.27	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	321.46	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 39.50
over (min) 5.00 20.00
Storage Coeff. (min)= 5.41 (ii) 18.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

PEAK FLOW (cms)= 1.93 0.32
TOTALS 2.141 (iii)

TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 17.37 35.26
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.31 0.62

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0131)
1 + 2 = 3
ID1= 1 (0051): 0.40 0.005 4.50 13.11
+ ID2= 2 (0052): 15.50 2.141 3.00 35.26
ID = 3 (0131): 15.90 2.141 3.00 34.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0132)
1 + 2 = 3
ID1= 1 (0131): 15.90 2.141 3.00 34.70
+ ID2= 2 (0139): 202.80 2.589 3.00 19.14
ID = 3 (0132): 218.70 4.731 3.00 20.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (350.0) -----
Distance Elevation Manning
0.00 81.70 0.1100
3.84 81.72 0.1100
5.87 80.72 0.1100
9.38 81.42 0.1100
49.64 81.07 0.1100
80.61 80.72 0.1100
85.61 81.14 0.1100

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.48 2.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 36.65
over (min) 5.00 20.00
Storage Coeff. (min)= 4.03 (ii) 17.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.06

PEAK FLOW (cms)= 0.66 0.13 0.750 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 16.79 32.97
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30 0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

93.32 80.00 0.1100
95.04 80.45 0.1100
102.72 80.66 0.1100
110.13 78.93 0.1100 /0.0700 Main Channel
118.05 78.63 0.0700 Main Channel
124.40 78.89 0.0700 /0.1100 Main Channel
132.18 79.61 0.1100
139.34 79.23 0.1100
144.67 79.43 0.1100
149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70
2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

hydrograph
AREA QPEAK TPEAK R.V. <-pipe / channel->
(ha) (cms) (hrs) (mm) MAX DEPTH MAX VEL
INFLOW : ID= 2 (0132) 218.70 4.73 3.00 20.28 0.59 0.65
OUTFLOW: ID= 1 (0530) 218.70 3.56 3.08 20.28 0.52 0.57

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min
Area (ha)= 5.80
Total Imp(%)= 60.00
Dir. Conn.(%)= 48.00

- THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3
ID1= 1 (0530): 218.70 3.556 3.08 20.28
+ ID2= 2 (5302): 5.80 0.750 3.00 32.97
ID = 3 (0134): 224.50 4.045 3.00 20.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3
ID1= 1 (0120): 273.90 6.640 3.00 20.88
+ ID2= 2 (0134): 224.50 4.045 3.00 20.60
ID = 3 (0135): 498.40 10.685 3.00 20.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (40.0) -----
Distance Elevation Manning
0.00 79.36 0.0900
7.45 79.32 0.0900
13.77 79.27 0.0900
20.24 79.24 0.0900
27.28 79.26 0.0900
34.16 79.13 0.0900
40.79 79.05 0.0900
47.58 79.05 0.0900
54.30 79.07 0.0900
60.87 79.24 0.0900
71.39 79.48 0.0900
73.53 78.96 0.0900
76.96 78.07 0.0900
82.21 77.08 0.0900 /0.0700 Main Channel
85.82 76.28 0.0700 Main Channel
89.97 76.89 0.0700 Main Channel

91.35 77.38 0.0700 /0.0900 Main Channel
95.27 78.68 0.0900
98.44 79.63 0.0900
102.89 79.89 0.0900

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.16	76.44	.113E+03	0.0	0.14	88.10	
0.32	76.60	.451E+03	0.1	0.23	55.50	
0.49	76.76	.101E+04	0.4	0.30	42.35	
0.65	76.92	.180E+04	0.9	0.37	34.57	
0.81	77.09	.276E+04	1.6	0.44	28.86	
0.97	77.25	.388E+04	2.7	0.52	24.37	
1.14	77.41	.516E+04	4.0	0.59	21.56	
1.30	77.57	.660E+04	5.7	0.66	19.26	
1.46	77.74	.822E+04	7.8	0.72	17.67	
1.62	77.90	.100E+05	10.1	0.77	16.48	
1.79	78.06	.120E+05	12.8	0.82	15.54	
1.95	78.22	.141E+05	15.9	0.87	14.74	
2.11	78.39	.163E+05	19.4	0.91	14.06	
2.27	78.55	.187E+05	23.2	0.95	13.47	
2.44	78.71	.212E+05	27.3	0.99	12.95	
2.60	78.87	.239E+05	31.9	1.02	12.50	
2.76	79.04	.267E+05	36.8	1.06	12.10	
2.92	79.20	.320E+05	39.4	0.94	13.56	
3.09	79.36	.409E+05	45.7	0.85	14.94	

<--- hydrograph <---> <-pipe / channel->						
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
		(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW: ID= 2 (	0135)	498.40	10.69	3.00	20.75	1.66
OUTFLOW: ID= 1 (	0507)	498.40	8.37	3.42	20.75	1.50
						0.73

CALIB						
NASHYD (5071)	Area (ha)=	8.40	Curve Number (CN)=	74.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	1.72				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39

0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26
TOTALS							
Max.Eff.Inten.(mm/hr)=	88.14	45.45					
over (min)	5.00	20.00					
Storage Coeff. (min)=	7.22 (ii)	19.13 (ii)					
Unit Hyd. Tpeak (min)=	5.00	20.00					
Unit Hyd. peak (cms)=	0.17	0.06					
PEAK FLOW (cms)=	2.67	1.51	3.672 (iii)				
TIME TO PEAK (hrs)=	3.00	3.25	3.00				
RUNOFF VOLUME (mm)=	50.50	20.95	29.82				
TOTAL RAINFALL (mm)=	56.50	56.50	56.50				
RUNOFF COEFFICIENT =	0.89	0.37	0.53				

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0121)						
1 + 2 = 3						
ID1= 1 (5071):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)		
+ ID2= 2 (5072):	8.40	0.101	5.00	17.08		
ID = 3 (0121):	40.50	3.672	3.00	29.82		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.187

PEAK FLOW (cms)= 0.101 (i)
TIME TO PEAK (hrs)= 5.000
RUNOFF VOLUME (mm)= 17.077
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.302

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (5072)	Area (ha)=	40.50				
ID= 1 DT= 5.0 min	Total Imp(%)=	45.00	Dir. Conn.(%)=	30.00		

IMPERVIOUS			PERVIOUS (i)		
Surface Area (ha)=	18.23	22.28			
Dep. Storage (mm)=	6.00	8.00			
Average Slope (%)=	1.00	1.00			
Length (m)=	519.62	40.00			
Mannings n	0.013	0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39

ADD HYD (0122)						
1 + 2 = 3						
ID1= 1 (0121):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)		
+ ID2= 2 (0507):	48.90	3.677	3.00	27.63		
ID = 3 (0122):	498.40	8.366	3.42	20.75		
ID = 3 (0122):	547.30	10.436	3.25	21.37		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

STORE HYD(1505)						
ID= 1 DT= 5.0min	AREA (ha)=	253.60				
	QPEAK (cms)=	0.78				
	TPEAK (hrs)=	15.58				
	VOLUME (mm)=	47.57				

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17

19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11

23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10

27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

4.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.27
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27

8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21

12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17

16.42	1.09	47.67	0.50	78.92	0.54	118.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	118.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	118.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	118.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	118.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	118.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	118.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	118.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	118.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	118.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14

20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12

24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11

28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.1		

Ultimate - with BSS1

V V I SSSS U U A L (v 6.2.2018)
V V I SS U U A A L
V V I SS U U A A A A L
V V I SS U U A A L
W I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\
f51af81c-ffc2-4a9d-a058-c8f1233c78b9\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\
f51af81c-ffc2-4a9d-a058-c8f1233c78b9\
DATE: 04-10-2024 TIME: 01:42:28
USER:

COMMENTS: _____

** SIMULATION : 100yrHope_SCSII_6hr.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\

PEAK FLOW (cms)= 3.787 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 38.043
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (5012) Area (ha)= 37.32
ID= 1 DT= 5.0 min Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 107.14
over (min) 5.00 15.00
Storage Coeff. (min)= 5.56 (ii) 14.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

fc287717-ea81-4509-917c-0fddd7b9a7f0\ff8cc32c
Ptotal=101.62 mm Comments: Mount Hope-6 hour SCS Distribution Desig

TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.00 4.09 1.50 10.23 3.00 22.51 4.50 6.14
0.17 4.09 1.67 10.23 3.17 22.51 4.67 6.14
0.33 4.09 1.83 10.23 3.33 22.51 4.83 6.14
0.50 6.14 2.00 12.28 3.50 10.23 5.00 4.09
0.67 6.14 2.17 12.28 3.67 10.23 5.17 4.09
0.83 6.14 2.33 12.28 3.83 10.23 5.33 4.09
1.00 6.14 2.50 61.38 4.00 8.18 5.50 4.09
1.17 6.14 2.67 110.48 4.17 8.18 5.67 4.09
1.33 6.14 2.83 159.59 4.33 8.18

CALIB NASHYD (5011) Area (ha)= 80.20 Curve Number (CN)= 65.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Unit Hyd Qpeak (cms)= 3.621

Unit Hyd. peak (cms)= 0.20 0.08
TOTALS
PEAK FLOW (cms)= 3.73 3.85 6.934 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 43.75 56.20
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.43 0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5011): 80.20 3.787 3.83 38.04
+ ID2= 2 (5012): 37.32 6.934 3.00 56.20
ID = 3 (0100): 117.52 7.862 3.00 43.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (1537.5) -----
Distance Elevation Manning
0.00 89.30 0.1100
4.20 89.28 0.1100
9.03 88.80 0.1100
21.55 88.78 0.1100
29.06 88.24 0.1100
39.87 87.83 0.1100
55.54 87.84 0.1100 /0.0700 Main Channel
57.54 86.84 0.0700 Main Channel
59.04 86.84 0.0700 Main Channel
61.04 87.84 0.0700 /0.1100 Main Channel
74.10 87.86 0.1100
87.72 88.07 0.1100
101.34 88.18 0.1100
113.53 88.23 0.1100
128.57 88.32 0.1100
142.19 88.61 0.1100

155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.10	86.94	.202E+03	0.0	0.25	78.80	
0.20	87.04	.452E+03	0.1	0.37	52.91	
0.30	87.14	.749E+03	0.3	0.47	42.34	
0.40	87.24	.109E+04	0.5	0.55	36.26	
0.50	87.34	.149E+04	0.8	0.62	32.18	
0.60	87.44	.193E+04	1.1	0.68	29.19	
0.70	87.54	.241E+04	1.5	0.74	26.87	
0.80	87.64	.295E+04	2.0	0.79	25.01	
0.90	87.74	.353E+04	2.5	0.84	23.46	
1.00	87.84	.421E+04	3.1	0.89	22.39	
1.10	87.94	.489E+04	4.5	0.63	31.56	
1.21	88.05	.150E+05	7.1	0.56	35.43	
1.33	88.17	.233E+05	10.6	0.54	36.49	
1.44	88.28	.346E+05	15.5	0.53	37.18	
1.56	88.40	.484E+05	22.8	0.56	35.35	
1.67	88.51	.634E+05	32.1	0.60	32.90	
1.79	88.63	.807E+05	41.2	0.61	32.65	
1.90	88.74	.101E+06	54.6	0.64	30.77	
2.02	88.86	.124E+06	64.7	0.62	31.85	

<---- hydrograph ---->					<-pipe / channel->	
AREA	OPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0100)	117.52	7.86	3.00	43.81	1.24	0.56
OUTFLOW: ID= 1 (0502)	117.52	4.95	3.92	43.81	1.12	0.62

CALIB	
NASHYD (5691)	Area (ha)= 2.30 Curve Number (CN)= 69.3
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.07

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.315 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 42.025
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.414

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5092)	Area (ha)= 1.73
ID= 1 DT= 5.0 min	Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 0.88	0.85	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 107.39	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09

0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.500 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 39.092
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.385

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
NASHYD (5021)	Area (ha)= 3.67 Curve Number (CN)= 68.8
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.43

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09

1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 116.63
over (min) 5.00 15.00
Storage Coeff. (min)= 2.21 (ii) 10.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.39 0.18 0.542 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 58.31 77.18
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.57 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5082)	Area (ha)= 0.71
ID= 1 DT= 5.0 min	Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 0.52	0.19	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 68.80	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14

0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 116.18
over (min) 5.00 10.00
Storage Coeff. (min)= 1.69 (ii) 9.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.11

PEAK FLOW (cms)= 0.20 0.04 0.243 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 43.76 76.94
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.43 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5682)
ID= 1 DT= 5.0 min
Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 75.62
over (min) 5.00 15.00
Storage Coeff. (min)= 1.55 (ii) 11.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.33 0.09

PEAK FLOW (cms)= 0.15 0.02 0.172 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 37.55 75.29
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.37 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min
Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min
Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 53.82
over (min) 5.00 15.00
Storage Coeff. (min)= 3.25 (ii) 14.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

PEAK FLOW (cms)= 1.14 0.35 1.424 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 95.62 31.92 58.67
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.31 0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 116.63
over (min) 5.00 10.00
Storage Coeff. (min)= 1.73 (ii) 6.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

PEAK FLOW (cms)= 0.26 0.04 0.307 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 58.31 87.41
TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.57 0.86

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5752)
ID= 1 DT= 5.0 min
Area (ha)= 0.78
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 102.89
over (min) 5.00 15.00

Storage Coeff. (min)= 1.74 (ii) 10.33 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09
TOTALS
PEAK FLOW (cms)= 0.22 0.05 0.267 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 51.14 80.04
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.50 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 117.49
over (min) 5.00 15.00
Storage Coeff. (min)= 2.34 (ii) 10.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.60 0.15 0.730 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 58.77 82.72
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.58 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0501): 6.23 1.424 3.00 58.67
+ ID2= 2 (5082): 3.67 0.315 3.33 42.03
ID = 3 (0481): 9.90 1.601 3.00 52.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0481): 9.90 1.601 3.00 52.50
+ ID2= 2 (5082): 0.71 0.243 3.00 76.94
ID = 1 (0481): 10.61 1.844 3.00 54.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0481): 10.61 1.844 3.00 54.14
+ ID2= 2 (5092): 1.73 0.542 3.00 77.18
ID = 3 (0481): 12.34 2.386 3.00 57.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0481): 12.34 2.386 3.00 57.37
+ ID2= 2 (0510): 0.76 0.307 3.00 87.41
ID = 1 (0481): 13.10 2.693 3.00 59.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0481): 13.10 2.693 3.00 59.11
+ ID2= 2 (5282): 2.08 0.730 3.00 82.72
ID = 3 (0481): 15.18 3.423 3.00 62.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 3 (0481): 15.18 3.423 3.00 62.35
+ ID2= 2 (5682): 0.53 0.172 3.00 75.29
ID = 1 (0481): 15.71 3.595 3.00 62.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	3.595	3.00	62.78
+ ID2= 2 (5691):	2.30	0.500	3.00	39.09
=====				
ID = 3 (0481):	18.01	4.095	3.00	59.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	4.095	3.00	59.76
+ ID2= 2 (5752):	0.78	0.267	3.00	80.04
=====				
ID = 1 (0481):	18.79	4.362	3.00	60.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)	Area	(ha)=	7.22	Curve Number (CN)= 80.7
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
=====	U.H. Tp(hrs)=		0.20	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09

1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 1.440 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 56.609
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.557

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
NASHYD (0522)	Area	(ha)=	3.31	Curve Number (CN)= 63.1
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
=====	U.H. Tp(hrs)=		0.16	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.454 (i)
TIME TO PEAK (hrs)= 3.000

RUNOFF VOLUME (mm)= 35.995
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.354

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0580)	Area	(ha)=	1.87	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.22	0.65	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	111.65	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 75.62
over (min) 5.00 15.00
Storage Coeff. (min)= 2.26 (ii) 11.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS

PEAK FLOW (cms)= 0.54 0.08 0.604 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 37.55 75.29
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.37 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0519)	Area	(ha)=	2.08	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.35	0.73	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	117.76	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		

1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 15.00
Storage Coeff. (min)= 2.34 (ii) 12.21 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.60 0.09
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 95.62 36.14
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36

TOTALS
0.668 (iii)
3.00
74.80
101.62
0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529)
ID= 1 DT= 5.0 min

Area (ha)= 1.80
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09

0.833 6.14 | 2.333 12.28 | 3.833 10.23 | 5.33 4.09
0.917 6.14 | 2.417 12.28 | 3.917 10.23 | 5.42 4.09
1.000 6.14 | 2.500 12.28 | 4.000 10.23 | 5.50 4.09
1.083 6.14 | 2.583 61.38 | 4.083 8.18 | 5.58 4.09
1.167 6.14 | 2.667 61.38 | 4.167 8.18 | 5.67 4.09
1.250 6.14 | 2.750 110.48 | 4.250 8.18 | 5.75 4.09
1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 10.00
Storage Coeff. (min)= 2.24 (ii) 6.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

PEAK FLOW (cms)= 0.62 0.06
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 36.14
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36

TOTALS
0.682 (iii)
3.00
82.53
101.62
0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0519):	2.08	0.668	3.00	74.80
+ ID2= 2 (0529):	1.80	0.682	3.00	82.53
=====				
ID = 3 (0267):	3.88	1.349	3.00	78.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)
3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0267):	3.88	1.349	3.00	78.39
+ ID2= 2 (0580):	1.87	0.604	3.00	75.29

ID = 1 (0267): 5.75 1.953 3.00 77.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0267):	5.75	1.953	3.00	77.38
+ ID2= 2 (0522):	3.31	0.454	3.00	35.99
=====				
ID = 3 (0265):	9.06	2.407	3.00	62.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0523)
ID= 1 DT= 5.0 min

Area (ha)= 6.61
Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09

1.333 6.14 | 2.833 110.48 | 4.333 8.18 | 5.83 4.09
1.417 6.14 | 2.917 159.59 | 4.417 8.18 |
1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 216.34
over (min) 5.00 10.00
Storage Coeff. (min)= 3.31 (ii) 9.69 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.26 0.11

PEAK FLOW (cms)= 1.44 0.70
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 55.38
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.55

TOTALS
2.137 (iii)
3.00
75.50
101.62
0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0265):	9.06	2.407	3.00	62.26
+ ID2= 2 (0523):	6.61	2.137	3.00	75.50
=====				
ID = 3 (0260):	15.67	4.544	3.00	67.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0525)
ID= 1 DT= 5.0 min

Area (ha)= 1.45
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				
Max.Eff.Inten.(mm/hr)=		159.59	101.73						
over (min)		5.00	15.00						
Storage Coeff. (min)=		2.10 (ii)	10.73 (ii)						
Unit Hyd. Tpeak (min)=		5.00	15.00						
Unit Hyd. peak (cms)=		0.31	0.09						
PEAK FLOW (cms)=		0.42	0.09	0.494 (iii)					
TIME TO PEAK (hrs)=		3.00	3.08	3.00					
RUNOFF VOLUME (mm)=		95.62	50.55	79.84					
TOTAL RAINFALL (mm)=		101.62	101.62	101.62					
RUNOFF COEFFICIENT =		0.94	0.50	0.79					

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0272)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	275.07	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.19 (ii)	7.99 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.31	0.13	
PEAK FLOW (cms)=	0.39	0.24	0.626 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	72.75	84.64
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.72	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0270)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0264):	24.34	6.389	3.00	65.23
+ ID2= 2 (0527):	1.68	0.626	3.00	84.64
=====				
ID = 3 (0270):	26.02	7.015	3.00	66.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (5202)			
ID= 1 DT= 5.0 min			
	Area	(ha)=	2.27
	Total Imp(%)=	61.00	Dir. Conn.(%)= 61.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.38	0.89
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	123.02	40.00
Mannings n	=	0.013	0.250

ID1= 1 (0260):	15.67	4.544	3.00	67.85
+ ID2= 2 (0525):	1.45	0.494	3.00	79.84
=====				
ID = 3 (0272):	17.12	5.038	3.00	68.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0264)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0272):	17.12	5.038	3.00	68.86
+ ID2= 2 (0524):	7.22	1.440	3.00	56.61
=====				
ID = 3 (0264):	24.34	6.389	3.00	65.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0527)			
ID= 1 DT= 5.0 min			
	Area	(ha)=	1.68
	Total Imp(%)=	76.00	Dir. Conn.(%)= 52.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.28	0.40
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	105.83	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)=	159.59	107.32	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.40 (ii)	10.85 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.30	0.09	
PEAK FLOW (cms)=	0.61	0.17	0.753 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	53.41	79.16
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.53	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0273)	

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0270):	26.02	7.015	3.00	66.48
+ ID2= 2 (5202):	2.27	0.753	3.00	79.16
=====				
ID = 3 (0273):	28.29	7.768	3.00	67.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0274)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1400	0.8343
	0.0195	0.2416	0.2360	1.0014
	0.0700	0.5564	0.3420	1.6616

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0273)	28.290	7.768	3.00	67.50
OUTFLOW: ID= 1 (0274)	28.290	0.328	5.17	67.26

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.22
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.5752

CALIB	Area (ha)=	0.94
STANDHYD (0526)	Total Imp(%)=	78.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	78.00
=====		
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.73	0.21
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	79.16	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14

0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 107.62
over (min) 5.00 10.00
Storage Coeff. (min)= 1.84 (ii) 6.19 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

PEAK FLOW (cms)= 0.32 0.05
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 53.57
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0476	0.0432
	0.0096	0.0220	0.0579	0.0480
	0.0206	0.0306	0.0671	0.0528
	0.0297	0.0360	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0526)	0.940	0.374	3.00	86.37
OUTFLOW: ID= 1 (0279)	0.940	0.064	3.25	85.75

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.21
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0514

CALIB	Area (ha)=	1.44
STANDHYD (0574)	Total Imp(%)=	78.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	78.00
=====		
	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.12	0.32
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	97.98	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 90.76
over (min) 5.00 10.00
Storage Coeff. (min)= 2.09 (ii) 6.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14

TOTALS

PEAK FLOW (cms)= 0.50 0.06 0.559 (iii)

TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 45.03 84.49
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.44 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0730	0.0642
	0.0150	0.0327	0.0890	0.0712
	0.0310	0.0455	0.1030	0.0784
	0.0450	0.0536	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0574)	1.440	0.559	3.00	84.49
OUTFLOW: ID= 1 (0276)	1.440	0.099	3.25	84.10

PEAK FLOW REDUCTION [Qout/Qin](%)= 17.76
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0766

ADD HYD (0275)	1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0276):		1.44	0.099	3.25	84.10
+ ID2= 2 (0279):		0.94	0.064	3.25	85.75
=====					
ID = 3 (0275):		2.38	0.164	3.25	84.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	19.59
STANDHYD (0571)	Total Imp(%)=	68.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	50.00

Surface Area (ha)= IMPERVIOUS 13.32 PERVIOUS (i) 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 151.76
over (min) 5.00 15.00
Storage Coeff. (min)= 4.58 (ii) 11.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09
PEAK FLOW (cms)= 4.17 1.61 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 5.535 (iii)
RUNOFF VOLUME (mm)= 95.62 49.14 72.38
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.48 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (0572) | Area (ha)= 11.31
| ID= 1 DT= 5.0 min | Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 218.54
over (min) 5.00 15.00
Storage Coeff. (min)= 3.88 (ii) 10.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
PEAK FLOW (cms)= 2.44 1.33 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 3.610 (iii)
RUNOFF VOLUME (mm)= 95.62 65.60 80.61

TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.65 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0282) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0571): 19.59 5.535 3.00 72.38
+ ID2= 2 (0572): 11.31 3.610 3.00 80.61
===== 30.90 9.144 3.00 75.39
ID = 3 (0282): 30.90 9.144 3.00 75.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0573) | Area (ha)= 2.66
| ID= 1 DT= 5.0 min | Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.60 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09

0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 98.49
over (min) 5.00 15.00
Storage Coeff. (min)= 2.52 (ii) 11.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09
PEAK FLOW (cms)= 0.70 0.18 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.855 (iii)
RUNOFF VOLUME (mm)= 95.62 48.91 76.93
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.48 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0285) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0282): 30.90 9.144 3.00 75.39
+ ID2= 2 (0573): 2.66 0.855 3.00 76.93
===== 33.56 10.000 3.00 75.51
ID = 3 (0285): 33.56 10.000 3.00 75.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0280) | OVERFLOW IS OFF
| IN= 2----> OUT= 1 |
DT= 5.0 min
OUTFLOW STORAGE | OUTFLOW STORAGE
(cms) (ha.m.) | (cms) (ha.m.)
0.0000 0.0000 | 0.2300 1.1312

0.0230 0.3704 | 0.2810 1.3850
0.0900 0.8066 | 0.4120 2.2335

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

INFLOW : ID= 2 (0285) 33.560 10.000 3.00 75.51
OUTFLOW: ID= 1 (0280) 33.560 0.395 5.25 74.78

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.95
TIME SHIFT OF PEAK FLOW (min)=135.00
MAXIMUM STORAGE USED (ha.m.)= 2.1254

ADD HYD (0102)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0274): 28.29 0.328 5.17 67.26
+ ID2= 2 (0275): 2.38 0.164 3.25 84.76
=====

ID = 3 (0102): 30.67 0.460 3.58 68.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 3 (0102): 30.67 0.460 3.58 68.61
+ ID2= 2 (0280): 33.56 0.395 5.25 74.78
=====

ID = 1 (0102): 64.23 0.829 3.92 71.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0102): 64.23 0.829 3.92 71.83
+ ID2= 2 (0481): 18.79 4.362 3.00 60.60
=====

ID = 3 (0102): 83.02 4.874 3.00 69.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

1.83 86.04 .376E+04 13.6 1.35 4.60
2.03 86.24 .462E+04 17.6 1.42 4.37
2.24 86.45 .560E+04 22.1 1.47 4.22
2.45 86.66 .695E+04 27.6 1.48 4.20
2.66 86.87 .925E+04 31.2 1.25 4.94
2.86 87.07 .168E+05 43.1 0.96 6.48
3.07 87.28 .297E+05 67.7 0.85 7.30
3.28 87.49 .456E+05 103.1 0.84 7.38
3.48 87.69 .663E+05 159.6 0.89 6.93
3.69 87.90 .907E+05 223.4 0.92 6.77

Area QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)

INFLOW : ID= 2 (0102) 200.54 7.66 3.00 54.36 1.43 1.18
OUTFLOW: ID= 1 (0503) 200.54 6.81 3.08 54.36 1.36 1.14

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 13.80
Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00

IMPERVIOUS PERVIOUS (i)
(ha) 10.49 3.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09

ADD HYD (0102)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 3 (0102): 83.02 4.874 3.00 69.29
+ ID2= 2 (0502): 117.52 4.947 3.92 43.81
=====

ID = 1 (0102): 200.54 7.662 3.00 54.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

DATA FOR SECTION (1157.9)

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 / 0.0700
127.36	84.21	0.0700
128.86	84.21	0.0700
130.86	85.21	0.0700 / 0.0900
131.88	86.36	0.0900
140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89

1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 145.90
over (min)= 5.00 10.00
Storage Coeff. (min)= 4.12 (ii) 8.90 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.24 0.12

TOTALS
PEAK FLOW (cms)= 3.98 0.96 4.940 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 53.59 81.75
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0503): 200.54 6.814 3.08 54.36
+ ID2= 2 (5032): 13.80 4.940 3.00 81.75
=====

ID = 3 (0104): 214.34 11.370 3.00 56.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

DATA FOR SECTION (815.4)

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900

122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	214.34	11.37	3.00	56.12	0.86
OUTFLOW : ID= 1 (0504)	214.34	8.10	3.17	56.12	0.81

CALIB	
STANDHYD (5042)	Area (ha)= 7.70
ID= 1 DT= 5.0 min	Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.77	1.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	226.57	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	140.83
over (min)	5.00	10.00
Storage Coeff. (min)=	3.46 (ii)	8.38 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.26	0.12
TOTALS		
PEAK FLOW (cms)=	2.18	0.55
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	50.74
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)					
1	2	3			
ID1= 1 (0504):	214.34	8.097	3.17	56.12	
+ ID2= 2 (5042):	7.70	2.728	3.00	79.91	
=====					
ID = 3 (0106):	222.04	9.564	3.00	56.94	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (5212)	Area (ha)= 15.70
ID= 1 DT= 5.0 min	Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.78	3.93
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	323.52	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09

1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	161.71
over (min)	5.00	10.00
Storage Coeff. (min)=	4.29 (ii)	9.17 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.23	0.12
TOTALS		
PEAK FLOW (cms)=	4.44	1.27
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	60.49
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0114)					
1	2	3			
ID1= 1 (0106):	222.04	9.564	3.00	56.94	
+ ID2= 2 (5212):	15.70	5.713	3.00	83.68	
=====					
ID = 3 (0114):	237.74	15.277	3.00	58.71	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)	
IN= 2--> OUT= 1	Routing time step (min)'= 5.00

----- DATA FOR SECTION (553.6) -----		
Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100

69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 / 0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	
501.51	83.16	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<----- hydrograph ----->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.74	15.28	3.00	58.71	0.94
OUTFLOW: ID= 1 (0505)	237.74	13.62	3.00	58.71	0.88

STANDHYD (5052)	Area (ha)= 15.90	
ID= 1 DT= 5.0 min	Total Imp(%)= 74.00	Dir. Conn.(%)= 65.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	11.77		4.13	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	325.58		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14				
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14				
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14				
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14				
0.417	4.09	1.917	10.23	3.417	22.51	4.90	6.14				
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14				
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09				
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09				
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09				
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09				
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09				
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09				
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09				
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09				
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09				
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09				
1.417	6.14	2.917	159.59	4.417	8.18						
1.500	6.14	3.000	159.59	4.500	8.18						

Max.Eff.Inten.(mm/hr)=	159.59	132.71	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.30	(ii) 9.30	(ii)
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.12	
			TOTALS
PEAK FLOW (cms)=	4.43	1.07	5.495 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	49.62	79.52
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.49	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)					
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0505):	237.74	13.622	3.08	58.71	
+ ID2= 2 (5052):	15.90	5.495	3.00	79.52	
=====					
ID = 3 (0108):	253.64	18.862	3.00	60.01	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->					
Distance	Elevation	Manning			
0.00	81.42	0.0900			
7.45	81.36	0.0900			
32.34	80.38	0.0900			
45.97	80.05	0.0900			
65.23	79.93	0.0900			
84.49	80.35	0.0900			
113.49	80.02	0.0900			
136.48	80.07	0.0900			
188.81	79.81	0.0900			
197.86	79.25	0.0900 / 0.0700	Main Channel		
200.70	78.22	0.0700	Main Channel		
203.29	79.35	0.0700 / 0.0900	Main Channel		
204.01	79.67	0.0900			
236.47	80.40	0.0900			
277.80	80.48	0.0900			
305.35	80.37	0.0900			
346.67	80.41	0.0900			
387.99	80.33	0.0900			
415.54	80.53	0.0900			
447.88	80.49	0.0900			

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56

0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<----- hydrograph ----->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.64	18.86	3.00	60.01	1.82
OUTFLOW: ID= 1 (0506)	253.64	15.64	3.08	60.01	1.77

CALIB	
STANDHYD (5062)	Area (ha)= 11.70
ID= 1 DT= 5.0 min	Total Imp(%)= 75.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	8.78		2.92	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	279.28		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14				
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14				
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14				
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14				
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14				

0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 149.80
over (min) 5.00 10.00
Storage Coeff. (min)= 3.92 (ii) 8.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.24 0.12

TOTALS
PEAK FLOW (cms)= 3.28 0.88 4.160 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 54.10 81.09
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0506):	253.64	15.638	3.08	60.81
+ ID2= 2 (5062):	11.70	4.160	3.00	81.09
ID = 3 (0110):	265.34	18.133	3.00	60.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=
STANDHYD (5102)	1.70	

|ID= 1 DT= 5.0 min | Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.09	0.61
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	106.46	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 125.18
over (min) 5.00 15.00
Storage Coeff. (min)= 2.20 (ii) 10.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.10

TOTALS
PEAK FLOW (cms)= 0.39 0.14 0.507 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 47.19 72.37
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.46 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)	Routing time step (min)=
IN= 2----> OUT= 1	5.00

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 / 0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 / 0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5102)	1.70	0.51	3.00	72.37	0.10
OUTFLOW: ID= 1 (0511)	1.70	0.37	3.00	72.34	0.07

CALIB	Area	(ha)=
STANDHYD (5112)	3.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.07	0.93
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	141.42	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 142.77
over (min) 5.00 15.00
Storage Coeff. (min)= 2.61 (ii) 10.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.10

TOTALS
PEAK FLOW (cms)= 0.77 0.24 0.972 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 53.17 77.79

TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.52 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0511): 1.70 0.367 3.00 72.34
+ ID2= 2 (5112): 3.00 0.972 3.00 77.79
ID = 3 (0117): 4.70 1.339 3.00 75.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->
Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 / 0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 / 0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71
0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71
0.79 80.51 .934E+03 0.9 0.46 16.84

0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 141.05
over (min) 5.00 15.00
Storage Coeff. (min)= 2.82 (ii) 10.39 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

TOTALS
PEAK FLOW (cms)= 0.98 0.31 1.247 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 52.94 77.27
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.52 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0512): 4.70 0.822 3.00 75.75
+ ID2= 2 (5122): 3.90 1.247 3.00 77.27
ID = 3 (0119): 8.60 1.969 3.00 76.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0110): 265.34 18.133 3.00 60.94
+ ID2= 2 (0119): 8.60 1.969 3.00 76.44

0.93 80.64 .245E+04 1.6 0.31 24.96
1.06 80.77 .873E+04 4.6 0.25 31.51
1.19 80.90 .179E+05 11.4 0.30 26.08
1.32 81.04 .278E+05 22.6 0.38 20.45
1.46 81.17 .381E+05 37.5 0.46 16.91
1.60 81.31 .484E+05 55.4 0.54 14.57
1.74 81.45 .588E+05 76.0 0.61 12.90
1.87 81.59 .693E+05 99.3 0.67 11.63
2.01 81.72 .798E+05 125.0 0.73 10.64
2.15 81.86 .903E+05 153.1 0.80 9.83
2.29 82.00 .101E+06 183.5 0.85 9.16
2.42 82.14 .112E+06 214.3 0.90 8.68
2.56 82.27 .123E+06 244.4 0.93 8.40

<---- hydrograph ----> <-pipe / channel-->
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm) MAX DEPTH (m) MAX VEL (m/s)
INFLOW : ID= 2 (0117) 4.70 1.34 3.00 75.82 0.87 0.36
OUTFLOW: ID= 1 (0512) 4.70 0.82 3.08 75.75 0.76 0.45

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min | Area (ha)= 3.90
Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.65 1.25
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 161.25 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09

ID = 3 (0120): 273.94 20.102 3.00 61.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6011)
ID= 1 DT= 5.0 min | Area (ha)= 44.10 Curve Number (CN)= 62.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.942 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6012) | Area (ha)= 11.00

|ID= 1 DT= 5.0 min | Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.08 7.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 91.88
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.85 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08
TOTALS
PEAK FLOW (cms)= 0.76 1.16 1.726 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.35 48.35
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0011): 44.10 1.942 3.83 35.16
+ ID2= 2 (0012): 11.00 1.726 3.00 48.35
ID = 3 (0124): 55.10 2.327 3.50 37.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021)
ID= 1 DT= 5.0 min
Area (ha)= 43.60 Curve Number (CN)= 62.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.734 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min
Area (ha)= 12.90
Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 94.24
over (min)= 5.00 15.00

Storage Coeff. (min)= 4.04 (ii) 12.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 1.28 1.26 2.325 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.77 52.62
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0021): 43.60 1.734 4.00 35.16
+ ID2= 2 (0022): 12.90 2.325 3.00 52.62
ID = 3 (0125): 56.50 2.680 3.00 39.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0124): 55.10 2.327 3.50 37.79
+ ID2= 2 (0125): 56.50 2.680 3.00 39.14
ID = 3 (0126): 111.60 4.886 3.00 38.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400

8.54	92.59	0.1400	
22.11	92.47	0.1400	
48.74	91.83	0.1400	
67.59	91.58	0.1400	
86.45	91.21	0.1400	
103.50	90.80	0.1400	
118.09	90.23	0.1400	
127.84	90.09	0.1400 / 0.0700	Main Channel
129.84	89.59	0.0700	Main Channel
130.34	90.09	0.0700 / 0.1400	Main Channel
140.57	90.14	0.1400	
161.87	90.11	0.1400	
177.03	90.04	0.1400	
188.67	89.87	0.1400	
199.59	90.31	0.1400	
212.02	90.96	0.1400	
225.58	91.35	0.1400	
252.71	91.66	0.1400	
274.11	91.86	0.1400	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<----- hydrograph ----->		<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0126)	111.60	4.89	3.00
OUTFLOW: ID= 1 (0603)	111.60	3.29	4.50
			38.48
			0.71
			0.25
			0.66
			0.23

Surface Area	(ha)=	1.58	0.44
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	116.05	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	86.94
over (min)	5.00	10.00
Storage Coeff. (min)=	2.32 (ii)	6.66 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.30	0.14
PEAK FLOW (cms)=	0.70	0.08
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	43.13
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.42
		0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (0613)	Area	(ha)=	1.77	Curve Number (CN)=	66.0
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.22			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)=	0.220 (i)
TIME TO PEAK (hrs)=	3.083
RUNOFF VOLUME (mm)=	38.999
TOTAL RAINFALL (mm)=	101.620
RUNOFF COEFFICIENT =	0.384

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (6222)	Area	(ha)=	2.02		
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00	
	IMPERVIOUS	PERVIOUS (i)			

Surface Area	(ha)=	1.04	0.47
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	100.00	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	157.45
over (min)	5.00	10.00
Storage Coeff. (min)=	2.12 (ii)	9.37 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.31	0.12

PEAK FLOW (cms)=	0.33	0.14
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	49.44
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.49
		0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0615)	Area (ha)= 2.14
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.67	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	119.44	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	86.94
over (min)	5.00	10.00
Storage Coeff. (min)=	2.36 (ii)	6.70 (ii)

1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	259.23
over (min)	5.00	10.00
Storage Coeff. (min)=	2.11 (ii)	8.05 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.31	0.13

PEAK FLOW (cms)=	0.33	0.18	0.507 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	
RUNOFF VOLUME (mm)=	95.62	58.82	77.22
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.58	0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6302)	Area (ha)= 0.86
ID= 1 DT= 5.0 min	Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.81	0.05
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	75.72	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14

Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.30	0.14	
			TOTALS
PEAK FLOW (cms)=	0.74	0.09	0.824 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	43.13	84.07
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.42	0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0618)	Area (ha)= 1.49
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.33
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	99.67	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09

0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	5.00
Storage Coeff. (min)=	1.79 (ii)	4.19 (ii)
Unit Hyd. Tpeak (min)=	5.00	5.00
Unit Hyd. peak (cms)=	0.32	0.24

PEAK FLOW (cms)=	0.36	0.01	0.368 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	36.14	92.05
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36	0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0617)	Area (ha)= 2.31
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.80	0.51
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	124.10	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	286.12
over (min)	5.00	10.00
Storage Coeff. (min)=	2.41 (ii)	8.12 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.30	0.13

PEAK FLOW (cms)=	0.51	0.31	0.818 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	65.65	80.63
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.65	0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0290)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0614):	1.50	0.474	3.00	72.53
+ ID2= 2 (0615):	2.14	0.824	3.00	84.07

ID = 3 (0290): 3.64 1.298 3.00 79.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1				
ID1= 3 (0290):	3.64	1.298	3.00	79.31
+ ID2= 2 (0617):	2.31	0.818	3.00	80.63
ID = 1 (0290):	5.95	2.116	3.00	79.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0290):	5.95	2.116	3.00	79.83
+ ID2= 2 (0618):	1.49	0.507	3.00	77.22
ID = 3 (0290):	7.44	2.623	3.00	79.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3 + 2 = 1				
ID1= 3 (0290):	7.44	2.623	3.00	79.30
+ ID2= 2 (6222):	2.02	0.779	3.00	84.07
ID = 1 (0290):	9.46	3.402	3.00	80.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0290):	9.46	3.402	3.00	80.32
+ ID2= 2 (6302):	0.86	0.368	3.00	92.05
ID = 3 (0290):	10.32	3.770	3.00	81.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (6212)	Area (ha)=	Dir. Conn.(%)=
ID= 1 DT= 5.0 min	1.15	65.00

IMPERVIOUS		PERVIOUS (i)
Surface Area (ha)=	0.75	0.40
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	87.56	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	15.00
Storage Coeff. (min)=	1.96 (ii)	11.83 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.31	0.09

PEAK FLOW (cms)=	0.33	0.05	0.370 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	95.62	36.14	74.80
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36	0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (6232)	Area (ha)=	Dir. Conn.(%)=
ID= 1 DT= 5.0 min	0.85	65.00

IMPERVIOUS		PERVIOUS (i)
Surface Area (ha)=	0.55	0.30
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	75.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	15.00
Storage Coeff. (min)=	1.79 (ii)	11.66 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.24 0.04 0.274 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 36.14 74.79
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)
1 + 2 = 3

ID1= 1 (6212): 1.15 0.370 3.00 74.80
+ ID2= 2 (6232): 0.85 0.274 3.00 74.79
=====

ID = 3 (0288): 2.00 0.645 3.00 74.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0626)
ID= 1 DT= 5.0 min

Area (ha)= 0.96
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.58 0.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 80.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14

ADD HYD (0297)
3 + 2 = 1

ID1= 3 (0297): 12.32 4.414 3.00 80.24
+ ID2= 2 (0613): 1.77 0.220 3.08 39.00
=====

ID = 1 (0297): 14.09 4.606 3.00 75.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)
1 + 2 = 3

ID1= 1 (0297): 14.09 4.606 3.00 75.06
+ ID2= 2 (0626): 0.96 0.319 3.00 79.09
=====

ID = 3 (0297): 15.05 4.925 3.00 75.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0302)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.1070 0.3146
0.0150 0.1715 0.7100 0.8031

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0297) 15.050 4.925 3.00 75.32
OUTFLOW: ID= 1 (0302) 15.050 0.656 3.58 75.13

PEAK FLOW REDUCTION [Qout/Qin](%)= 13.32
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.7608

CALIB
STANDHYD (6202)
ID= 1 DT= 5.0 min

Area (ha)= 1.26
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.18 0.08
Dep. Storage (mm)= 6.00 8.00

0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 109.06
over (min) 5.00 15.00
Storage Coeff. (min)= 1.85 (ii) 10.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.25 0.08 0.319 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 54.32 79.09
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)
1 + 2 = 3

ID1= 1 (0288): 2.00 0.645 3.00 74.80
+ ID2= 2 (0290): 10.32 3.770 3.00 81.30
=====

ID = 3 (0297): 12.32 4.414 3.00 80.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

Average Slope (%)= 1.00 1.00
Length (m)= 91.65 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 72.74
over (min) 5.00 5.00
Storage Coeff. (min)= 2.01 (ii) 4.41 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.31 0.23

PEAK FLOW (cms)= 0.52 0.01 0.539 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 36.14 92.05
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.36 0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0292)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0580	0.0848
0.0090	0.0366	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (6202)	1.260	0.539	3.00	92.05
OUTFLOW: ID= 1 (0292)	1.260	0.056	3.58	91.24

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.35
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0829

CALIB
STANDHYD (0606)
ID= 1 DT= 5.0 min

Area (ha)= 1.98
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	1.29	0.69
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	114.89	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09

0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	5.00
Storage Coeff. (min)=	2.37 (ii)	4.77 (ii)
Unit Hyd. Tpeak (min)=	5.00	
Unit Hyd. peak (cms)=	0.30	0.22
PEAK FLOW (cms)=	0.90	0.03
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	36.14
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0295)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0612)	2.180	0.930	3.00	92.05
OUTFLOW: ID= 1 (0295)	2.180	0.096	3.58	91.59

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.37
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1433

1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	72.74
over (min)	5.00	5.00
Storage Coeff. (min)=	2.30 (ii)	12.17 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.30	0.09
PEAK FLOW (cms)=	0.57	0.08
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	95.62	36.14
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.36

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0612)
ID= 1 DT= 5.0 min

Area (ha)= 2.18
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	2.05	0.13
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	120.55	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14

ADD HYD (0306)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0292):	1.26	0.056	3.58	91.24
+ ID2= 2 (0295):	2.18	0.096	3.58	91.59
ID = 3 (0306):	3.44	0.152	3.58	91.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0306):	3.44	0.152	3.58	91.46
+ ID2= 2 (0606):	1.98	0.636	3.00	74.80
ID = 1 (0306):	5.42	0.752	3.00	85.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304)
IN= 2----> OUT= 1

Routing time step (min)= 5.00

Distance	Elevation	Manning
0.00	92.50	0.0700
36.57	92.00	0.0700
90.03	91.00	0.0700
124.58	90.00	0.0700 /0.0350
128.34	89.59	0.0350
129.84	89.59	0.0350
132.39	90.00	0.0350 /0.0700
163.76	91.00	0.0700
187.47	91.00	0.0700
203.83	91.00	0.0700
306.44	92.00	0.0700

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13

0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

<---- hydrograph ---->						<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL		
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)		
INFLOW : ID= 2 (0306)	5.42	0.75	3.00	85.37	0.26	0.76	
OUTFLOW: ID= 1 (0304)	5.42	0.41	3.08	85.36	0.20	0.66	

CALIB		
STANDHYD (0616)	Area (ha)=	0.44
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00
	Dir. Conn.(%)=	78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.34	0.10
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	54.16	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14

0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	109.06	
over (min)	5.00	10.00	
Storage Coeff. (min)=	1.47 (ii)	5.81 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.33	0.15	
			TOTALS
PEAK FLOW (cms)=	0.15	0.02	0.176 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	54.32	86.53
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.53	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (6102)	Area (ha)=	2.49
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00
	Dir. Conn.(%)=	50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.94	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	128.84	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

Average Slope (%)=	1.00	1.00
Length (m)=	77.03	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	109.06	
over (min)	5.00	10.00	
Storage Coeff. (min)=	1.81 (ii)	6.16 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.32	0.15	
			TOTALS
PEAK FLOW (cms)=	0.31	0.05	0.355 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	54.32	86.53
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.53	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (0624)	Area (ha)=	0.89
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00
	Dir. Conn.(%)=	78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.69	0.20
Dep. Storage (mm)=	6.00	8.00

ADD HYD (0286)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6102):	2.49	0.933	3.00	85.63
+ ID2= 2 (0616):	0.44	0.176	3.00	86.53
=====				
ID = 3 (0286):	2.93	1.109	3.00	85.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0286)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0286):	2.93	1.109	3.00	85.76
+ ID2= 2 (0624):	0.89	0.355	3.00	86.53
=====				
ID = 1 (0286):	3.82	1.464	3.00	85.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0305)				
IN= 2----> OUT= 1				
DT= 5.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1760	0.2330
	0.0280	0.0927	0.0000	0.0000

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0286)	3.820	1.464	3.00	85.94
OUTFLOW: ID= 1 (0305)	3.820	0.169	3.58	85.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.56				
TIME SHIFT OF PEAK FLOW (min)= 35.00				
MAXIMUM STORAGE USED (ha.m.)= 0.2268				

CALIB				
STANDHYD (0619)				
ID= 1 DT= 5.0 min				

	Area (ha)=	1.64		
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.07	0.57	
Dep. Storage	(mm)=	6.00	8.00	

Average Slope (%)= 1.00 1.00
Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)= 159.59 120.10
over (min) 5.00 15.00
Storage Coeff. (min)= 2.18 (ii) 10.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09
PEAK FLOW (cms)= 0.47 0.13 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.580 (iii)
RUNOFF VOLUME (mm)= 95.62 60.19 3.00
TOTAL RAINFALL (mm)= 101.62 101.62 83.21
RUNOFF COEFFICIENT = 0.94 0.59 101.62 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0293)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0302):	15.05	0.656	3.58	75.13
+ ID2= 2 (0304):	5.42	0.413	3.08	85.36
=====				
ID = 3 (0293):	20.47	0.960	3.17	77.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)				
3 + 2 = 1				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0293):	20.47	0.960	3.17	77.84
+ ID2= 2 (0305):	3.82	0.169	3.58	85.72
=====				
ID = 1 (0293):	24.29	1.124	3.50	79.08

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0293):	24.29	1.124	3.50	79.08
+ ID2= 2 (0619):	1.64	0.580	3.00	83.21
=====				
ID = 3 (0293):	25.93	1.501	3.00	79.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6032)				
ID= 1 DT= 5.0 min				

	Area (ha)=	29.63		
	Total Imp(%)=	47.00	Dir. Conn.(%)=	32.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	13.93	15.70	
Dep. Storage	(mm)=	1.50	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	444.45	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)= 159.59 134.53
over (min) 5.00 15.00
Storage Coeff. (min)= 5.19 (ii) 12.90 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08
PEAK FLOW (cms)= 3.98 3.47 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 6.929 (iii)
RUNOFF VOLUME (mm)= 100.12 52.78 3.00
TOTAL RAINFALL (mm)= 101.62 101.62 67.93
RUNOFF COEFFICIENT = 0.99 0.52 101.62 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)				
1 + 2 = 3				

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0293):	25.93	1.501	3.00	79.34
+ ID2= 2 (0603):	111.60	3.287	4.50	38.47

=====

ID = 3 (0128): 137.53 4.239 4.33 46.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	137.53	4.239	4.33	46.18
+ ID2= 2 (0032):	29.63	6.929	3.00	67.93
=====				
ID = 1 (0128):	167.16	9.315	3.00	50.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0004)		
IN= 2---- OUT= 1		
Routing time step (min)'= 5.00		
<----- DATA FOR SECTION (1414.9) ----->		
Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700
166.55	83.78	0.0700
168.05	84.78	0.0700 / 0.1100
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11

0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	175.99
over (min)	5.00	10.00
Storage Coeff. (min)=	4.87 (ii)	9.43 (iii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.22	0.12
TOTALS		
PEAK FLOW (cms)=	7.01	1.86
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	95.62	63.99
TOTAL RAINFALL (mm)=	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0004):	167.16	3.928	5.25	50.03
+ ID2= 2 (0042):	24.00	8.868	3.00	85.81
=====				
ID = 3 (0130):	191.16	11.698	3.00	54.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0005)	
IN= 2---- OUT= 1	
Routing time step (min)'= 5.00	

0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.16	9.31	3.00	50.03	2.64	0.08
OUTFLOW: ID= 1 (0004)	167.16	3.93	5.25	50.03	2.32	0.08

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB	
STANDHYD (0042)	
ID= 1 DT= 5.0 min	
Area (ha)=	24.00
Total Imp(%)=	78.00
Dir. Conn.(%)=	69.00
IMPERVIOUS	
Surface Area (ha)=	18.72
Dep. Storage (mm)=	6.00
Average Slope (%)=	1.00
Length (m)=	400.00
Mannings n =	0.013
PERVIOUS (i)	
	5.28
	8.00
	1.00
	40.00
	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51
0.167	4.09	1.667	10.23	3.167	22.51
0.250	4.09	1.750	10.23	3.250	22.51
0.333	4.09	1.833	10.23	3.333	22.51
0.417	4.09	1.917	10.23	3.417	22.51

INFLOW : ID= 2 (0130) 191.16 11.70 3.00 54.52 1.27 0.32
OUTFLOW: ID= 1 (0605) 191.16 5.46 3.25 54.52 1.01 0.34

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min
Area (ha)= 11.40
Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.21 3.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 155.13
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.89 (ii) 11.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
TOTALS
PEAK FLOW (cms)= 3.05 0.87 3.805 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 57.95 81.31
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.57 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0605): 191.16 5.463 3.25 54.52
+ ID2= 2 (6112): 11.40 3.805 3.00 81.31
ID = 3 (0139): 202.56 7.831 3.00 56.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min
Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14

0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 127.05
over (min)= 5.00 10.00
Storage Coeff. (min)= 4.30 (ii) 9.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.23 0.12
TOTALS
PEAK FLOW (cms)= 4.43 1.02 5.445 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 47.46 78.76
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.47 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0139): 202.56 7.831 3.00 56.03
+ ID2= 2 (6052): 15.90 5.445 3.00 78.76
ID = 3 (0132): 218.46 13.276 3.00 57.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1
Routing time step (min)= 5.00

<----- DATA FOR SECTION (350.0) ----->

Distance	Elevation	Manning
0.00	81.70	0.1100
3.84	81.72	0.1100
5.87	80.72	0.1100
9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100
85.61	81.14	0.1100
93.32	80.00	0.1100
95.04	80.45	0.1100
102.72	80.66	0.1100
110.13	78.93	0.1100 / 0.0700
118.05	78.63	0.0700
124.40	78.89	0.0700 / 0.1100
132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ----> <-pipe / channel->
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm) MAX DEPTH (m) MAX VEL (m/s)
INFLOW : ID= 2 (0132) 218.46 13.28 3.00 57.68 0.93 0.78

OUTFLOW: ID= 1 (0530) 218.46 10.46 3.08 57.68 0.84 0.75

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

Area (ha)= 5.80
Total Imp(%)= 66.00 Dir. Conn.(%)= 56.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.83 1.97
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 12.28 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 119.48
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.18 (ii) 11.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.09

TOTALS
PEAK FLOW (cms)= 1.42 0.40
TIME TO PEAK (hrs)= 3.00 3.08

47.58 79.05 0.0900
54.30 79.07 0.0900
60.87 79.24 0.0900
71.39 79.48 0.0900
73.53 78.96 0.0900
76.96 78.07 0.0900
82.21 77.08 0.0900 /0.0700 Main Channel
85.82 76.28 0.0700 Main Channel
89.97 76.89 0.0700 Main Channel
91.35 77.38 0.0700 /0.0900 Main Channel
95.27 78.68 0.0900
98.44 79.63 0.0900
102.89 79.89 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.16 76.44 .113E+03 0.0 0.14 88.10
0.32 76.60 .451E+03 0.1 0.23 55.50
0.49 76.76 .101E+04 0.4 0.30 42.35
0.65 76.92 .180E+04 0.9 0.37 34.57
0.81 77.09 .276E+04 1.6 0.44 28.86
0.97 77.25 .388E+04 2.7 0.52 24.37
1.14 77.41 .516E+04 4.0 0.59 21.56
1.30 77.57 .660E+04 5.7 0.66 19.26
1.46 77.74 .822E+04 7.8 0.72 17.67
1.62 77.90 .100E+05 10.1 0.77 16.48
1.79 78.06 .120E+05 12.8 0.82 15.54
1.95 78.22 .141E+05 15.9 0.87 14.74
2.11 78.39 .163E+05 19.4 0.91 14.06
2.27 78.55 .187E+05 23.2 0.95 13.47
2.44 78.71 .212E+05 27.3 0.99 12.95
2.60 78.87 .239E+05 31.9 1.02 12.50
2.76 79.04 .267E+05 36.8 1.06 12.10
2.92 79.20 .320E+05 39.4 0.94 13.56
3.09 79.36 .409E+05 45.7 0.85 14.94

----- hydrograph ----- <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0135) 498.20 31.57 3.00 59.93 2.59 1.02
OUTFLOW: ID= 1 (0507) 498.20 25.55 3.17 59.93 2.37 0.97

CALIB
STANDHYD (5072)
ID= 1 DT= 5.0 min

Area (ha)= 48.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 36.00

RUNOFF VOLUME (mm)= 95.62 46.34 73.94
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.46 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0530): 218.46 10.458 3.08 57.68
+ ID2= 2 (5302): 5.80 1.761 3.00 73.94
=====

ID = 3 (0134): 224.26 11.472 3.00 58.10

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0120): 273.94 20.102 3.00 61.43
+ ID2= 2 (0134): 224.26 11.472 3.00 58.10
=====

ID = 3 (0135): 498.20 31.574 3.00 59.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2----> OUT= 1 Routing time step (min)= 5.00

----- DATA FOR SECTION (40.0) -----
Distance Elevation Manning
0.00 79.36 0.0900
7.45 79.32 0.0900
13.77 79.27 0.0900
20.24 79.24 0.0900
27.28 79.26 0.0900
34.16 79.13 0.0900
40.79 79.05 0.0900

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 24.45 24.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 570.96 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 139.84
over (min)= 5.00 15.00
Storage Coeff. (min)= 6.03 (ii) 13.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08

TOTALS
PEAK FLOW (cms)= 7.24 5.52 11.930 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 55.09 69.68
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.54 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)				
1	2	3		

ID1= 1 (0507):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	498.20	25.547	3.17	59.93
+ ID2= 2 (5072):	48.90	11.930	3.00	69.68

ID = 3 (0122):	547.10	33.655	3.08	60.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (5402)			
ID= 1 DT= 5.0 min	Area (ha)=	9.40	
	Total Imp(%)=	50.00	Dir. Conn.(%)= 35.00

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	4.70		4.70	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	250.33		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		

1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)=	159.59	120.33	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.67 (ii)	11.74 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.25	0.09	
PEAK FLOW (cms)=	1.43	0.95	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	2.231 (iii)
RUNOFF VOLUME (mm)=	95.62	46.47	3.00
TOTAL RAINFALL (mm)=	101.62	101.62	63.67
RUNOFF COEFFICIENT	0.94	0.46	101.62
			0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505)		AREA	(ha)=	30.00
ID= 1 DT= 5.0min		QPEAK	(cms)=	0.78
		TPEAK	(hrs)=	15.58
		VOLUME	(mm)=	402.14

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17

1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17

5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.17
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.16
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15

26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10

30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

STORE HYD(1605)		AREA	(ha)=	30.00
ID= 1 DT= 5.0min		QPEAK	(cms)=	1.37
		TPEAK	(hrs)=	71.92
		VOLUME	(mm)=	625.27

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24

2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28

11.15	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.27	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.21
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18

15.43	1.83	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.84	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.85	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.86	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.87	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.88	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.88	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.88	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.89	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.89	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.89	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.89	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.89	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.89	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.89	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.18	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.89	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.89	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.88	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.89	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.88	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.87	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.86	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.86	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.85	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.84	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.84	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.83	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.82	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.81	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.80	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15

19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13

23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11

27.83 0.20 59.08 0.52 90.33 0.45 121.58 0.17 152.83 0.11
27.92 0.20 59.17 0.51 90.42 0.44 121.67 0.17 152.92 0.11
28.00 0.19 59.25 0.51 90.50 0.44 121.75 0.17 153.00 0.11
28.08 0.19 59.33 0.50 90.58 0.44 121.83 0.17 153.08 0.11
28.17 0.19 59.42 0.50 90.67 0.43 121.92 0.17 153.17 0.11
28.25 0.19 59.50 0.49 90.75 0.43 122.00 0.17 153.25 0.11
28.33 0.19 59.58 0.49 90.83 0.43 122.08 0.17 153.33 0.11
28.42 0.19 59.67 0.49 90.92 0.43 122.17 0.17 153.42 0.11
28.50 0.19 59.75 0.48 91.00 0.42 122.25 0.18 153.50 0.11
28.58 0.18 59.83 0.48 91.08 0.42 122.33 0.18 153.58 0.11
28.67 0.18 59.92 0.47 91.17 0.42 122.42 0.18 153.67 0.11
28.75 0.18 60.00 0.47 91.25 0.42 122.50 0.18 153.75 0.11
28.83 0.18 60.08 0.47 91.33 0.41 122.58 0.18 153.83 0.11
28.92 0.18 60.17 0.46 91.42 0.41 122.67 0.18 153.92 0.11
29.00 0.18 60.25 0.46 91.50 0.41 122.75 0.18 154.00 0.11
29.08 0.18 60.33 0.45 91.58 0.41 122.83 0.18 154.08 0.11
29.17 0.18 60.42 0.45 91.67 0.41 122.92 0.18 154.17 0.11
29.25 0.17 60.50 0.44 91.75 0.41 123.00 0.18 154.25 0.11
29.33 0.17 60.58 0.44 91.83 0.40 123.08 0.18 154.33 0.11
29.42 0.17 60.67 0.44 91.92 0.40 123.17 0.18 154.42 0.11
29.50 0.17 60.75 0.43 92.00 0.40 123.25 0.18 154.50 0.11
29.58 0.17 60.83 0.43 92.08 0.40 123.33 0.18 154.58 0.11
29.67 0.17 60.92 0.42 92.17 0.40 123.42 0.18 154.67 0.11
29.75 0.17 61.00 0.42 92.25 0.39 123.50 0.18 154.75 0.11
29.83 0.17 61.08 0.42 92.33 0.39 123.58 0.18 154.83 0.11
29.92 0.16 61.17 0.42 92.42 0.39 123.67 0.18 154.92 0.11
30.00 0.16 61.25 0.41 92.50 0.39 123.75 0.18 155.00 0.11
30.08 0.16 61.33 0.41 92.58 0.38 123.83 0.18 155.08 0.11
30.17 0.16 61.42 0.40 92.67 0.38 123.92 0.18 155.17 0.11
30.25 0.16 61.50 0.40 92.75 0.38 124.00 0.18 155.25 0.11
30.33 0.16 61.58 0.40 92.83 0.38 124.08 0.18 155.33 0.11
30.42 0.16 61.67 0.40 92.92 0.38 124.17 0.18 155.42 0.11
30.50 0.16 61.75 0.39 93.00 0.37 124.25 0.18 155.50 0.11
30.58 0.16 61.83 0.39 93.08 0.37 124.33 0.19 155.58 0.11
30.67 0.16 61.92 0.39 93.17 0.37 124.42 0.19 155.67 0.11
30.75 0.16 62.00 0.38 93.25 0.37 124.50 0.19 155.75 0.11
30.83 0.15 62.08 0.38 93.33 0.37 124.58 0.19 155.83 0.10
30.92 0.15 62.17 0.38 93.42 0.37 124.67 0.20 155.92 0.11
31.00 0.15 62.25 0.38 93.50 0.37 124.75 0.20 156.00 0.10
31.08 0.15 62.33 0.39 93.58 0.37 124.83 0.20
31.17 0.15 62.42 0.39 93.67 0.37 124.92 0.20

V V I SSSS U U A L (v 6.2.2018)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
VV I SSSS UUUU A A LLLL

0.50 4.06 2.00 8.11 3.50 6.76 5.00 2.70
0.67 4.06 2.17 8.11 3.67 6.76 5.17 2.70
0.83 4.06 2.33 8.11 3.83 6.76 5.33 2.70
1.00 4.06 2.50 40.56 4.00 5.41 5.50 2.70
1.17 4.06 2.67 73.01 4.17 5.41 5.67 2.70
1.33 4.06 2.83 105.46 4.33 5.41 5.83 2.70

CALIB
NASHYD (5011) Area (ha)= 80.20 Curve Number (CN)= 65.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.741 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 18.089
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.268

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y M M O O
O O T T H H Y Y M M O O
000 T T H H Y Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voain.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\VHS\860df144-956f-4cfc-88fc-f31f1a71e94a\303bd5a6-54f3-459b-b9c6-c9745aab87f8\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\VHS\860df144-956f-4cfc-88fc-f31f1a71e94a\303bd5a6-54f3-459b-b9c6-c9745aab87f8\
DATE: 04-10-2024 TIME: 01:42:31
USER:

COMMENTS:

** SIMULATION : 10yrII6.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\fc287717-ea81-4509-917c-0fddd7b9a7f0\62f6350e
Ptotal= 67.60 mm Comments: Mount Hope-6 hour SCS Distribution Desig
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.00 2.70 1.50 6.76 3.00 14.87 4.50 4.06
0.17 2.70 1.67 6.76 3.17 14.87 4.67 4.06
0.33 2.70 1.83 6.76 3.33 14.87 4.83 4.06

CALIB
STANDHYD (5012) Area (ha)= 37.32
ID= 1 DT= 5.0 min Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 44.47
over (min) 5.00 20.00
Storage Coeff. (min)= 6.56 (ii) 18.58 (iii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

TOTALS
PEAK FLOW (cms)= 2.40 1.55 3.431 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 61.60 21.60 31.20
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.32 0.46

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	1.741	3.92	18.09
+ ID2= 2 (5012):	37.32	3.431	3.00	31.20

ID = 3 (0100):	117.52	3.793	3.00	22.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)	
IN= 2----> OUT= 1	
Routing time step (min)'= 5.00	

<----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 /0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 /0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)

0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.245 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 18.974
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.281

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
NASHYD (5021)	
ID= 1 DT= 5.0 min	
Area (ha)=	3.67
Ia (mm)=	8.00
U.H. Tp(hrs)=	0.43
Curve Number (CN)=	68.8
# of Linear Res.(N)=	3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70

0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.494E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

		<---- hydrograph ---->			<-pipe / channel->	
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
		(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0100)	117.52	3.79	3.00	22.25	1.05	0.74
OUTFLOW: ID= 1 (0502)	117.52	2.74	3.58	22.25	0.93	0.86

CALIB	
NASHYD (5691)	
ID= 1 DT= 5.0 min	
Area (ha)=	2.30
Ia (mm)=	8.00
U.H. Tp(hrs)=	0.07
Curve Number (CN)=	69.3
# of Linear Res.(N)=	3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70

1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.147 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 20.352
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.301

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5092)	
ID= 1 DT= 5.0 min	
Area (ha)=	1.73
Total Imp(%)=	50.60
Dir. Conn.(%)=	50.60

			IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.88	0.85			
Dep. Storage	(mm)=	6.00	8.00			
Average Slope	(%)=	1.00	1.00			
Length	(m)=	107.39	40.00			
Mannings n	=	0.013	0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 52.93
over (min) 5.00 15.00
Storage Coeff. (min)= 2.61 (ii) 13.82 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08
PEAK FLOW (cms)= 0.25 0.08
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 30.54
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.45

TOTALS
0.322 (iii)
3.00
46.25
67.60
0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5082)
ID= 1 DT= 5.0 min
Area (ha)= 0.71
Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.52 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 68.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70

0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 29.81
over (min) 5.00 20.00
Storage Coeff. (min)= 1.83 (ii) 15.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.32 0.07
PEAK FLOW (cms)= 0.10 0.01
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 61.60 17.82
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.26

TOTALS
0.107 (iii)
3.00
46.26
67.60
0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min
Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.43
over (min) 5.00 15.00
Storage Coeff. (min)= 2.00 (ii) 13.61 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.13 0.02
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 21.69
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.32

TOTALS
0.147 (iii)
3.00
47.22
67.60
0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5682)
ID= 1 DT= 5.0 min
Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06

0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 20.98
over (min) 5.00 25.00
Storage Coeff. (min)= 3.83 (ii) 20.06 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05

PEAK FLOW (cms)= 0.75 0.12
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 61.60 14.77
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.22

TOTALS
0.811 (iii)
3.00
34.44
67.60
0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min
Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 52.93
over (min) 5.00 15.00
Storage Coeff. (min)= 2.04 (ii) 13.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.17 0.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.187 (iii)
RUNOFF VOLUME (mm)= 61.60 30.54 54.76
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.45 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5752)
ID= 1 DT= 5.0 min
Area (ha)= 0.78
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 44.30
over (min) 5.00 15.00
Storage Coeff. (min)= 2.06 (ii) 14.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.15 0.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.166 (iii)
RUNOFF VOLUME (mm)= 61.60 25.86 49.08
TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.38 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

Storage Coeff. (min)= 2.76 (ii) 13.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

PEAK FLOW (cms)= 0.39 0.07 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.451 (iii)
RUNOFF VOLUME (mm)= 61.60 30.86 50.84
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.46 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3
ID1= 1 (0501): 6.23 0.811 3.00 34.44
+ ID2= 2 (5021): 3.67 0.147 3.33 20.35
ID = 3 (0481): 9.90 0.887 3.00 29.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1
ID1= 3 (0481): 9.90 0.887 3.00 29.21
+ ID2= 2 (5082): 0.71 0.147 3.00 47.22
ID = 1 (0481): 10.61 1.033 3.00 30.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3
ID1= 1 (0481): 10.61 1.033 3.00 30.42
+ ID2= 2 (5092): 1.73 0.322 3.00 46.25

Max.Eff.Inten.(mm/hr)= 105.46 53.51
over (min) 5.00 15.00

=====

ID = 3 (0481): 12.34 1.356 3.00 32.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |

| 3 + 2 = 1 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	12.34	1.356	3.00	32.64
+ ID2= 2 (0510):	0.76	0.187	3.00	54.76
=====				
ID = 1 (0481):	13.10	1.542	3.00	33.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	13.10	1.542	3.00	33.92
+ ID2= 2 (5282):	2.08	0.451	3.00	50.84
=====				
ID = 3 (0481):	15.18	1.993	3.00	36.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |

| 3 + 2 = 1 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	15.18	1.993	3.00	36.24
+ ID2= 2 (5682):	0.53	0.107	3.00	46.26
=====				
ID = 1 (0481):	15.71	2.100	3.00	36.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	15.71	2.100	3.00	36.58
+ ID2= 2 (5691):	2.30	0.245	3.00	18.97
=====				
ID = 3 (0481):	18.01	2.345	3.00	34.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0481) |

| 3 + 2 = 1 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	18.01	2.345	3.00	34.33
+ ID2= 2 (5752):	0.78	0.166	3.00	49.08
=====				
ID = 1 (0481):	18.79	2.511	3.00	34.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |

| NASHYD (0524) |

| ID= 1 DT= 5.0 min |

Area	(ha)=	7.22	Curve Number (CN)=	80.7
Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp	(hrs)=	0.20		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 0.738 (i)
TIME TO PEAK (hrs)= 3.083

RUNOFF VOLUME (mm)= 29.420
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.435

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

| NASHYD (0522) |

| ID= 1 DT= 5.0 min |

Area	(ha)=	3.31	Curve Number (CN)=	63.1
Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp	(hrs)=	0.16		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.207 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 16.970
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.251

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |

| STANDHYD (0580) |

| ID= 1 DT= 5.0 min |

Area	(ha)=	1.87	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 0.65
Surface Area	1.22	0.65
Dep. Storage	(mm)= 6.00	0.00
Average Slope	(%)= 1.00	1.00
Length	(m)= 111.65	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 29.81
over (min) 5.00 20.00
Storage Coeff. (min)= 2.67 (ii) 16.77 (iii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.06

PEAK FLOW (cms)= 0.35 0.03 0.373 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 61.60 17.82 46.27
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.26 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0519)	Area (ha)= 2.08
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.35	0.73
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	117.76	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	28.44
over (min)	5.00	20.00
Storage Coeff. (min)=	2.76 (ii)	17.13 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.28	0.06

TOTALS

PEAK FLOW (cms)=	0.39	0.03	0.413 (iii)
TIME TO PEAK (hrs)=	3.00	3.25	3.00
RUNOFF VOLUME (mm)=	61.60	17.04	46.00
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.25	0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0529)	Area (ha)= 1.80
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.40	0.40
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	109.54	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70

1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Max.Eff.Inten.(mm/hr)=	105.46	28.44
over (min)	5.00	20.00
Storage Coeff. (min)=	2.64 (ii)	17.01 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.29	0.06

TOTALS

PEAK FLOW (cms)=	0.41	0.02	0.420 (iii)
TIME TO PEAK (hrs)=	3.00	3.25	3.00
RUNOFF VOLUME (mm)=	61.60	17.04	51.79
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.25	0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)						
1	2	=	3			

ID1= 1 (0519):			AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
			2.08	0.413	3.00	46.00
+ ID2= 2 (0529):			1.80	0.420	3.00	51.79
=====						
ID = 3 (0267):			3.88	0.833	3.00	48.69

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)					
3 + 2 = 1					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0267):		3.88	0.833	3.00	48.69
+ ID2= 2 (0580):		1.87	0.373	3.00	46.27
=====					
ID = 1 (0267):		5.75	1.206	3.00	47.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
-----	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0267):	5.75	1.206	3.00	47.90
+ ID2= 2 (0522):	3.31	0.207	3.00	16.97
=====				
ID = 3 (0265):	9.06	1.413	3.00	36.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (0523)	Area (ha)= 6.61
ID= 1 DT= 5.0 min	Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.96	1.65
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	209.92	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	115.46
over (min)	5.00	15.00
Storage Coeff. (min)=	3.90 (ii)	12.11 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00

Unit Hyd. peak (cms)= 0.25 0.09

PEAK FLOW (cms)= 0.94 0.32

TIME TO PEAK (hrs)= 3.00 3.08

RUNOFF VOLUME (mm)= 61.60 29.30 45.45

TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.43 0.67

TOTALS

1.209 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0265):	9.06	1.413	3.00	36.60
+ ID2= 2 (0523):	6.61	1.209	3.00	45.45
=====				
ID = 3 (0260):	15.67	2.622	3.00	40.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (0525)

ID= 1 DT= 5.0 min

Area (ha)= 1.45

Total Imp(%)= 65.00

Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 0.94 0.51

Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00

Length (m)= 98.32 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06

0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 43.62

over (min)= 5.00 15.00

Storage Coeff. (min)= 2.48 (ii) 14.58 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.29 0.08

PEAK FLOW (cms)= 0.27 0.04 0.306 (iii)

TIME TO PEAK (hrs)= 3.00 3.17 3.00

RUNOFF VOLUME (mm)= 61.60 25.49 48.95

TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.38 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0272)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0260):	15.67	2.622	3.00	40.33
+ ID2= 2 (0525):	1.45	0.306	3.00	48.95
=====				
ID = 3 (0272):	17.12	2.928	3.00	41.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0264)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0272):	17.12	2.928	3.00	41.06
+ ID2= 2 (0524):	7.22	0.738	3.08	29.42
=====				
ID = 3 (0264):	24.34	3.602	3.00	37.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (0527)

ID= 1 DT= 5.0 min

Area (ha)= 1.68

Total Imp(%)= 76.00

Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 1.28 0.40

Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00

Length (m)= 105.83 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 162.12

over (min)= 5.00 10.00

Storage Coeff. (min)= 2.59 (ii) 9.75 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00

Unit Hyd. peak (cms)= 0.29 0.11

PEAK FLOW (cms)= 0.25 0.13 0.383 (iii)

TIME TO PEAK (hrs)= 3.00 3.00 3.00

RUNOFF VOLUME (mm)= 61.60 41.71 52.05

TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.91 0.62 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0270)

1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0264):	24.34	3.602	3.00	37.61
+ ID2= 2 (0527):	1.68	0.383	3.00	52.05
=====				
ID = 3 (0270):	26.02	3.985	3.00	38.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

STANDHYD (5202)

ID= 1 DT= 5.0 min

Area (ha)= 2.27

Total Imp(%)= 61.00

Dir. Conn.(%)= 61.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 1.38 0.89

Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00

Length (m)= 123.02 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 46.97
over (min) 5.00 15.00
Storage Coeff. (min)= 2.83 (ii) 14.59 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

TOTALS

PEAK FLOW (cms)= 0.40 0.07 0.461 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 27.31 48.22
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0273)					
1 + 2 = 3					

ID1= 1 (0270):		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
		26.02	3.985	3.00	38.54
+ ID2= 2 (5202):		2.27	0.461	3.00	48.22
=====					
ID = 3 (0273):		28.29	4.446	3.00	39.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0274)							
IN= 2----> OUT= 1							
DT= 5.0 min							
OVERFLOW IS OFF							
		OUTFLOW	STORAGE	OUTFLOW	STORAGE		
		(cms)	(ha.m.)	(cms)	(ha.m.)		
		0.0000	0.0000	0.1400	0.8343		
		0.0195	0.2416	0.2360	1.0014		
		0.0700	0.5564	0.3420	1.6616		
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
INFLOW : ID= 2 (0273)		28.290	4.446	3.00	39.32		
OUTFLOW: ID= 1 (0274)		28.290	0.192	5.25	39.12		

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.32
TIME SHIFT OF PEAK FLOW (min)=135.00
MAXIMUM STORAGE USED (ha.m.)= 0.9251

CALIB			
STANDHYD (0526)			
ID= 1 DT= 5.0 min			
		Area (ha)= 0.94	
		Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.73	0.21
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	79.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70

1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 47.15
over (min) 5.00 15.00
Storage Coeff. (min)= 2.17 (ii) 13.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS

PEAK FLOW (cms)= 0.21 0.02 0.228 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.41 54.07
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279)							
IN= 2----> OUT= 1							
DT= 5.0 min							
OVERFLOW IS OFF							
		OUTFLOW	STORAGE	OUTFLOW	STORAGE		
		(cms)	(ha.m.)	(cms)	(ha.m.)		
		0.0000	0.0000	0.0476	0.0432		
		0.0096	0.0220	0.0579	0.0480		
		0.0206	0.0306	0.0671	0.0528		
		0.0297	0.0360	0.0000	0.0000		
		AREA	QPEAK	TPEAK	R.V.		
		(ha)	(cms)	(hrs)	(mm)		
INFLOW : ID= 2 (0526)		0.940	0.228	3.00	54.07		
OUTFLOW: ID= 1 (0279)		0.940	0.027	3.58	53.45		

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.80
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0345

| CALIB

STANDHYD (0574)			
ID= 1 DT= 5.0 min			
		Area (ha)= 1.44	
		Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.12	0.32
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	97.98	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 37.49
over (min) 5.00 20.00
Storage Coeff. (min)= 2.47 (ii) 15.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.07

TOTALS

PEAK FLOW (cms)= 0.33 0.02 0.340 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 22.11 52.91
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.33 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

- CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276)		OVERFLOW IS OFF			
IN= 2----> OUT= 1					
DT= 5.0 min					

		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	0.0730	0.0642
		0.0150	0.0327	0.0890	0.0712
		0.0310	0.0455	0.1030	0.0784
		0.0450	0.0536	0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0574)		1.440	0.340	3.00	52.91
OUTFLOW: ID= 1 (0276)		1.440	0.041	3.58	52.53
		PEAK FLOW REDUCTION	[Qout/Qin](%)= 12.02		
		TIME SHIFT OF PEAK FLOW	(min)= 35.00		
		MAXIMUM STORAGE USED	(ha.m.)= 0.0513		

ADD HYD (0275) 1 + 2 = 3					AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0276):					1.44	0.041	3.58	52.53
+ ID2= 2 (0279):					0.94	0.027	3.58	53.45
ID = 3 (0275):					2.38	0.068	3.58	52.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0571) ID= 1 DT= 5.0 min		Area (ha)= 19.59 Total Imp(%)= 68.00	Dir. Conn.(%)= 50.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	13.32	6.27
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	361.39	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	77.97	
over (min)	5.00	20.00	
Storage Coeff. (min)=	5.41 (ii)	15.00 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.21	0.07	
			TOTALS
PEAK FLOW (cms)=	2.71	0.69	3.187 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	61.60	25.10	43.35
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.37	0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0572) ID= 1 DT= 5.0 min		Area (ha)= 11.31 Total Imp(%)= 71.00	Dir. Conn.(%)= 50.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	8.03	3.28
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	274.59	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	123.41	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.58 (ii)	12.57 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.23	0.08	
			TOTALS
PEAK FLOW (cms)=	1.59	0.67	2.164 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	61.60	36.25	48.92
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.54	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0282) 1 + 2 = 3					AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0571):					19.59	3.187	3.00	43.35
+ ID2= 2 (0572):					11.31	2.164	3.00	48.92
ID = 3 (0282):					30.90	5.352	3.00	45.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (0573) ID= 1 DT= 5.0 min		Area (ha)= 2.66 Total Imp(%)= 60.00	Dir. Conn.(%)= 60.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.60	1.06
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	133.17	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70

1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 41.76
over (min) 5.00 20.00
Storage Coeff. (min)= 2.97 (ii) 15.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07

TOTALS
0.512 (iii)
PEAK FLOW (cms)= 0.46 0.07
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 61.60 24.46
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.36 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0285)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0282):	30.90	5.352	3.00	45.39
+ ID2= 2 (0573):	2.66	0.512	3.00	46.74
=====				
ID = 3 (0285):	33.56	5.863	3.00	45.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0280)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2300	1.1312
0.0230	0.3704	0.2810	1.3850
0.0900	0.8066	0.4120	2.2335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0285)	33.560	5.863	3.00	45.50
OUTFLOW: ID= 1 (0280)	33.560	0.257	5.17	44.87

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.38

TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.2644

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0274):	28.29	0.192	5.25	39.12
+ ID2= 2 (0275):	2.38	0.068	3.58	52.89
=====				
ID = 3 (0102):	30.67	0.240	5.00	40.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	30.67	0.240	5.00	40.19
+ ID2= 2 (0280):	33.56	0.257	5.17	44.87
=====				
ID = 1 (0102):	64.23	0.496	5.08	42.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0102):	64.23	0.496	5.08	42.64
+ ID2= 2 (0481):	18.79	2.511	3.00	34.94
=====				
ID = 3 (0102):	83.02	2.676	3.00	40.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	83.02	2.676	3.00	40.89
+ ID2= 2 (0502):	117.52	2.740	3.00	22.25
=====				
ID = 1 (0102):	200.54	4.231	3.00	29.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1

Routing time step (min)= 5.00

<----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 / 0.0700 Main Channel
127.36	84.21	0.0700 Main Channel
128.86	84.21	0.0700 Main Channel
130.86	85.21	0.0700 / 0.0900 Main Channel
131.88	86.36	0.0900
140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93

3.69 87.90 .907E+05 223.4 0.92 6.77

<---- hydrograph ----> <-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0102)	200.54	4.23	3.00	29.97	1.12	0.98
OUTFLOW: ID= 1 (0503)	200.54	3.75	3.50	29.97	1.07	0.94

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)=	13.80
Total Imp(%)=	76.00
Dir. Conn.(%)=	67.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.49	3.31
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 76.59
over (min) 5.00 15.00

Storage Coeff. (min)= 4.87 (ii) 14.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 2.59 0.38
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 27.81
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41

TOTALS
2.901 (iii)
3.00
50.45
67.60
0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0503): 200.54 3.752 3.50 29.97
+ ID2= 2 (5032): 13.80 2.901 3.00 50.45
=====

ID = 3 (0104): 214.34 6.272 3.00 31.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2---> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->
Distance Elevation Manning
19.10 82.03 0.0900
29.01 83.14 0.0900
40.83 82.56 0.0900
81.51 82.27 0.0900
122.18 82.68 0.0900
169.31 82.61 0.0900
217.10 82.90 0.0900
229.61 83.66 0.0900 / 0.0700 Main Channel
232.80 81.85 0.0700 Main Channel
243.24 83.87 0.0700 Main Channel
257.77 84.06 0.0900
312.01 83.52 0.0900
415.18 83.86 0.0900

461.15 83.40 0.0900
501.83 83.53 0.0900
513.93 82.96 0.0900
526.85 83.23 0.0900
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0104) 214.34 6.27 3.00 31.29 0.77 0.33
OUTFLOW: ID= 1 (0504) 214.34 4.42 3.17 31.28 0.71 0.32

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min
Area (ha)= 7.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.77 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 72.79
over (min) 5.00 15.00
Storage Coeff. (min)= 4.09 (ii) 13.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 1.42 0.21
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 26.01
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.38

TOTALS
1.600 (iii)
3.00
49.14
67.60
0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0504): 214.34 4.416 3.17 31.28
+ ID2= 2 (5042): 7.70 1.600 3.00 49.14
=====

ID = 3 (0106): 222.04 5.227 3.00 31.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min
Area (ha)= 15.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.78 3.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 88.37
over (min) 5.00 15.00
Storage Coeff. (min)= 5.06 (ii) 14.19 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08

PEAK FLOW (cms)= 2.89 0.54 3.333 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 32.42 51.68
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.48 0.76

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0114)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 222.04 5.227 3.00 31.90
+ ID2= 2 (5212): 15.70 3.333 3.00 51.68
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100
69.13 79.02 0.1100
92.42 79.04 0.1100
98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 / 0.0700 Main Channel
336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 / 0.0900 Main Channel

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.40
over (min) 5.00 20.00
Storage Coeff. (min)= 5.08 (ii) 15.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.07

PEAK FLOW (cms)= 2.88 0.39 3.143 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.27 48.88
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.37 0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70
0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74
1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.74 8.56 3.00 33.21 0.67 0.50
OUTFLOW: ID= 1 (0505) 237.74 7.58 3.08 33.21 0.63 0.48

CALIB
STANDHYD (5052)
ID= 1 DT= 5.0 min
Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

ID1= 1 (0505): 237.74 7.580 3.08 33.21
+ ID2= 2 (5052): 15.90 3.143 3.00 48.88
=====

ID = 3 (0108): 253.64 10.374 3.00 34.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900
45.97 80.05 0.0900
65.23 79.93 0.0900
84.49 80.35 0.0900
113.49 80.02 0.0900
136.48 80.07 0.0900
188.81 79.81 0.0900
197.86 79.25 0.0900 / 0.0700 Main Channel
200.70 78.22 0.0700 Main Channel
203.29 79.35 0.0700 / 0.0900 Main Channel
204.01 79.67 0.0900
236.47 80.40 0.0900
277.80 80.48 0.0900
305.35 80.37 0.0900
346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 78.34 .979E+01 0.0 0.23 21.53
0.23 78.45 .392E+02 0.0 0.37 13.56
0.34 78.56 .881E+02 0.1 0.48 10.35
0.46 78.68 .157E+03 0.3 0.58 8.54
0.57 78.79 .245E+03 0.6 0.67 7.36
0.68 78.91 .352E+03 0.9 0.76 6.52
0.80 79.02 .480E+03 1.4 0.84 5.88
0.91 79.13 .627E+03 1.9 0.92 5.38
1.03 79.25 .793E+03 2.7 0.99 4.98
1.15 79.37 .103E+04 3.8 1.09 4.55
1.28 79.50 .135E+04 5.2 1.16 4.28
1.40 79.62 .175E+04 7.1 1.20 4.12
1.52 79.75 .228E+04 9.3 1.21 4.08

1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

			<---- hydrograph ---->			<-pipe / channel-->		
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (	0108)	253.64	10.37	3.00	34.19	1.58	1.16	
OUTFLOW: ID= 1 (	0506)	253.64	9.53	3.08	34.19	1.54	1.20	

CALIB		
STANDHYD (5062)	Area (ha)=	11.70
ID= 1 DT= 5.0 min	Total Imp(%)=	75.00
	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.78	2.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	279.28	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70

1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	78.89	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.63 (ii)	14.18 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
PEAK FLOW (cms)=	2.14	0.35	2.430 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	61.60	28.16	49.90
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT	0.91	0.42	0.74

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0506):	253.64	9.525	3.08	34.19
+ ID2= 2 (5062):	11.70	2.430	3.00	49.90
=====				
ID = 3 (0110):	265.34	11.107	3.00	34.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (5102)	Area (ha)=	1.70
ID= 1 DT= 5.0 min	Total Imp(%)=	64.00
	Dir. Conn.(%)=	52.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.09	0.61
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	106.46	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	53.29	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.60 (ii)	13.77 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.29	0.08	
PEAK FLOW (cms)=	0.26	0.06	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	0.306 (iii)
RUNOFF VOLUME (mm)=	61.60	23.76	43.43
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT	0.91	0.35	0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)		
IN= 2----> OUT= 1	Routing time step (min)=	5.00

<----- DATA FOR SECTION (553.6) ----->
Distance Elevation Manning

0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.12	79.13	.361E+03	0.6	0.24	9.91	
0.23	79.25	.776E+03	2.1	0.40	6.09	
0.35	79.37	.121E+04	4.3	0.52	4.65	
0.47	79.48	.165E+04	7.1	0.63	3.85	
0.59	79.60	.211E+04	10.5	0.72	3.34	
0.70	79.72	.258E+04	14.4	0.81	2.98	
0.82	79.84	.307E+04	18.8	0.89	2.71	
0.94	79.95	.357E+04	23.8	0.97	2.50	
1.05	80.07	.408E+04	29.2	1.04	2.33	
1.17	80.19	.461E+04	35.1	1.10	2.19	
1.29	80.30	.515E+04	41.5	1.17	2.07	
1.41	80.42	.571E+04	48.4	1.23	1.97	
1.52	80.54	.631E+04	55.8	1.28	1.88	
1.64	80.66	.695E+04	63.8	1.33	1.81	
1.76	80.77	.762E+04	72.3	1.38	1.76	
1.87	80.89	.833E+04	81.4	1.42	1.71	
2.00	81.02	.931E+04	92.4	1.44	1.68	
2.13	81.14	.109E+05	104.8	1.39	1.74	
2.25	81.27	.140E+05	120.9	1.25	1.93	

			<---- hydrograph ---->			<-pipe / channel-->		
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (	5102)	1.70	0.31	3.00	43.43	0.06	0.24	
OUTFLOW: ID= 1 (	0511)	1.70	0.22	3.00	43.42	0.04	0.24	

CALIB		
STANDHYD (5112)	Area (ha)=	3.00
ID= 1 DT= 5.0 min	Total Imp(%)=	69.00
	Dir. Conn.(%)=	58.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.07	0.93

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 74.74
over (min) 5.00 15.00
Storage Coeff. (min)= 3.08 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

PEAK FLOW (cms)= 0.50 0.11
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 27.53
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

2.42 82.14 .112E+06 214.3 0.90 8.68
2.56 82.27 .123E+06 244.4 0.93 8.40

----- hydrograph ----- <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0117) 4.70 0.82 3.00 45.89 0.75 0.45
OUTFLOW: ID= 1 (0512) 4.70 0.50 3.08 45.83 0.63 0.40

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min
Area (ha)= 3.90
Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.65 1.25
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 161.25 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 73.73

ADD HYD (0117)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0511): 1.70 0.222 3.00 43.42
+ ID2= 2 (5112): 3.00 0.595 3.00 47.29
ID = 3 (0117): 4.70 0.817 3.00 45.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (484.2) ----->
Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 /0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 /0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71
0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71
0.79 80.51 .934E+03 0.9 0.46 16.84
0.93 80.64 .245E+04 1.6 0.31 24.96
1.06 80.77 .873E+04 4.6 0.25 31.51
1.19 80.90 .179E+05 11.4 0.30 26.08
1.32 81.04 .278E+05 22.6 0.38 20.45
1.46 81.17 .381E+05 37.5 0.46 16.91
1.60 81.31 .484E+05 55.4 0.54 14.57
1.74 81.45 .588E+05 76.0 0.61 12.90
1.87 81.59 .693E+05 99.3 0.67 11.63
2.01 81.72 .798E+05 125.0 0.73 10.64
2.15 81.86 .903E+05 153.1 0.80 9.83
2.29 82.00 .101E+06 183.5 0.85 9.16

over (min) 5.00 15.00
Storage Coeff. (min)= 3.33 (ii) 13.15 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.08

PEAK FLOW (cms)= 0.64 0.15
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 27.37
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.40

TOTALS

0.761 (iii)
3.00
46.88
67.60
0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0512): 4.70 0.501 3.08 45.83
+ ID2= 2 (5122): 3.90 0.761 3.00 46.88
ID = 3 (0119): 8.60 1.226 3.00 46.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0110): 265.34 11.107 3.00 34.88
+ ID2= 2 (0119): 8.60 1.226 3.00 46.30
ID = 3 (0120): 273.94 12.334 3.00 35.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6011)
ID= 1 DT= 5.0 min
U.H. Tp(hrs)= 0.83
Area (ha)= 44.10
Ia (mm)= 8.00
Curve Number (CN)= 62.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.881 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6012)	Area (ha)= 11.00		
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00	Dir. Conn.(%)= 16.00	
IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	3.08	7.92	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	270.80	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 37.03
over (min) 5.00 20.00
Storage Coeff. (min)= 4.55 (ii) 17.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06

TOTALS
PEAK FLOW (cms)= 0.50 0.45 0.795 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 19.00 25.82
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.28 0.38

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)			
1 + 2 = 3	AREA	QPEAK	TPEAK R.V.

(ha) (cms) (hrs) (mm)			
ID1= 1 (6011):	44.10	0.881	3.83 16.50
+ ID2= 2 (6012):	11.00	0.795	3.00 25.82
=====			
ID = 3 (0124):	55.10	1.120	3.50 18.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6021)	Area (ha)= 43.60	Curve Number (CN)= 62.0	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.789 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6022)	Area (ha)= 12.90		
ID= 1 DT= 5.0 min	Total Imp(%)= 35.00	Dir. Conn.(%)= 23.00	

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 38.11
over (min) 5.00 20.00
Storage Coeff. (min)= 4.77 (ii) 17.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS
PEAK FLOW (cms)= 0.83 0.49 1.157 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 19.26 28.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.28 0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0021):	43.60	0.789	4.00	16.50
+ ID2= 2 (0022):	12.90	1.157	3.00	28.99
=====				
ID = 3 (0125):	56.50	1.292	3.00	19.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	1.120	3.50	18.36
+ ID2= 2 (0125):	56.50	1.292	3.00	19.35
=====				
ID = 3 (0126):	111.60	2.273	3.00	18.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)	
IN= 2--> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->				
Distance	Elevation	Manning		
0.00	92.58	0.1400		
8.54	92.59	0.1400		
22.11	92.47	0.1400		
48.74	91.83	0.1400		
67.59	91.58	0.1400		
86.45	91.21	0.1400		
103.50	90.80	0.1400		
118.09	90.23	0.1400		
127.84	90.09	0.1400 / 0.0700	Main Channel	
129.84	89.59	0.0700	Main Channel	
130.34	90.09	0.0700 / 0.1400	Main Channel	
140.57	90.14	0.1400		

161.87	90.11	0.1400
177.03	90.04	0.1400
188.67	89.87	0.1400
199.59	90.31	0.1400
212.02	90.96	0.1400
225.58	91.35	0.1400
252.71	91.66	0.1400
274.11	91.86	0.1400

TRAVEL TIME TABLE					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ---->					
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	2.27	3.00	18.86	0.60
OUTFLOW: ID= 1 (0603)	111.60	1.51	4.58	18.86	0.55

CALIB		Area (ha)=	Curve Number (CN)=
NASHYD (0613)	Ia (mm)=	1.77	66.0
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	8.00	# of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.101 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 18.628
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.276

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)=	Dir. Conn.(%)=
STANDHYD (6222)	Total Imp(%)=	2.02	78.00
ID= 1 DT= 5.0 min			

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	1.58	0.44	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	116.05	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46
over (min)= 5.00
Storage Coeff. (min)= 2.73 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.29

PEAK FLOW (cms)= 0.46
TIME TO PEAK (hrs)= 3.00
RUNOFF VOLUME (mm)= 61.60
TOTAL RAINFALL (mm)= 67.60
RUNOFF COEFFICIENT = 0.91

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)=	Dir. Conn.(%)=
STANDHYD (0614)	Total Imp(%)=	1.50	50.00
ID= 1 DT= 5.0 min			

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	1.04	0.47	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	

Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 81.09
over (min) 5.00 15.00
Storage Coeff. (min)= 2.50 (ii) 11.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

PEAK FLOW (cms)= 0.22 0.06 0.270 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 25.32 43.46
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.37 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0615) Area (ha)= 2.14
ID= 1 DT= 5.0 min Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.67 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 119.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 35.47
over (min) 5.00 20.00
Storage Coeff. (min)= 2.78 (ii) 15.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07

PEAK FLOW (cms)= 0.48 0.03 0.502 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 20.99 52.66
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.31 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

PEAK FLOW (cms)= 0.22 0.08 0.288 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 31.69 46.64
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.47 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302) Area (ha)= 0.86
ID= 1 DT= 5.0 min Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.81 0.05
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.72 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 141.15
over (min) 5.00 15.00
Storage Coeff. (min)= 2.50 (ii) 10.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.10

TOTALS

1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 34.29
over (min) 5.00 5.00
Storage Coeff. (min)= 2.12 (ii) 4.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.31 0.22

PEAK FLOW (cms)= 0.24 0.00
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 17.04
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25

TOTALS
0.241 (iii)
3.00
58.92
67.60
0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0617)
ID= 1 DT= 5.0 min

Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70

0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 161.84
over (min) 5.00 15.00
Storage Coeff. (min)= 2.85 (ii) 10.01 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.10

PEAK FLOW (cms)= 0.34 0.15
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 36.48
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.54

TOTALS
0.464 (iii)
3.00
49.04
67.60
0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0290)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0614):	1.50	0.270	3.00	43.46
+ ID2= 2 (0615):	2.14	0.502	3.00	52.66
=====				
ID = 3 (0290):	3.64	0.772	3.00	48.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0290):	3.64	0.772	3.00	48.87
+ ID2= 2 (0617):	2.31	0.464	3.00	49.04

ID = 1 (0290): 5.95 1.237 3.00 48.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0290):	5.95	1.237	3.00	48.93
+ ID2= 2 (0618):	1.49	0.288	3.00	46.64
=====				
ID = 3 (0290):	7.44	1.524	3.00	48.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0290):	7.44	1.524	3.00	48.47
+ ID2= 2 (6222):	2.02	0.475	3.00	52.66
=====				
ID = 1 (0290):	9.46	1.999	3.00	49.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0290):	9.46	1.999	3.00	49.37
+ ID2= 2 (6302):	0.86	0.241	3.00	58.92
=====				
ID = 3 (0290):	10.32	2.240	3.00	50.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6212)
ID= 1 DT= 5.0 min

Area (ha)= 1.15
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.75 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 87.56 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.31 (ii) 16.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.06

PEAK FLOW (cms)= 0.22 0.02
TIME TO PEAK (hrs)= 3.00 3.25
RUNOFF VOLUME (mm)= 61.60 17.04
TOTAL RAINFALL (mm)= 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25

TOTALS
0.230 (iii)
3.00
45.99
67.60
0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6232)
ID= 1 DT= 5.0 min

Area (ha)= 0.85
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.55 0.30
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.11 (ii) 16.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.31 0.06

TOTALS
PEAK FLOW (cms)= 0.16 0.01 0.170 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 45.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6212):	1.15	0.230	3.00	45.99
+ ID2= 2 (6232):	0.85	0.170	3.00	45.99
ID = 3 (0288):	2.00	0.400	3.00	45.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0626)
ID= 1 DT= 5.0 min

Area (ha)= 0.96
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.58 0.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 80.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70

1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.04
over (min) 5.00 15.00
Storage Coeff. (min)= 2.19 (ii) 13.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS
PEAK FLOW (cms)= 0.17 0.03 0.195 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.90 48.11
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0288):	2.00	0.400	3.00	45.99
+ ID2= 2 (0290):	10.32	2.240	3.00	50.16
ID = 3 (0297):	12.32	2.640	3.00	49.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0297):	12.32	2.640	3.00	49.49
+ ID2= 2 (0613):	1.77	0.101	3.08	18.63
ID = 1 (0297):	14.09	2.725	3.00	45.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0297):	14.09	2.725	3.00	45.61
+ ID2= 2 (0626):	0.96	0.195	3.00	48.11
ID = 3 (0297):	15.05	2.921	3.00	45.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0302)
IN= 2----> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1070	0.3146
0.0150	0.1715	0.7100	0.8031

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0297)	15.050	2.921	3.00	45.77
OUTFLOW: ID= 1 (0302)	15.050	0.310	3.75	45.58

PEAK FLOW REDUCTION [Qout/Qin](%)= 10.61
TIME SHIFT OF PEAK FLOW (min)= 45.00
MAXIMUM STORAGE USED (ha.m.)= 0.4792

CALIB
STANDHYD (6202)
ID= 1 DT= 5.0 min

Area (ha)= 1.26
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.18 0.08
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 91.65 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 34.29
over (min) 5.00 10.00
Storage Coeff. (min)= 2.37 (ii) 5.20 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.16

TOTALS
PEAK FLOW (cms)= 0.35 0.01 0.351 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 58.92
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

OVERFLOW IS OFF				
RESERVOIR(0292)				
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0580	0.0848
	0.0090	0.0366	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (6202)	1.260	0.351	3.00	58.92

OUTFLOW: ID= 1 (0292) 1.260 0.027 3.58 58.11

PEAK FLOW REDUCTION [Qout/Qin](%)= 7.82
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0548

CALIB			
STANDHYD (0606)	Area (ha)=	1.98	
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00

			IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.29	0.69	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	114.89	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 28.43
over (min) 5.00 20.00
Storage Coeff. (min)= 2.72 (ii) 17.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.06
TOTALS

PEAK FLOW (cms)= 0.37 0.03 0.394 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 46.00
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

OVERFLOW IS OFF			
CALIB			
STANDHYD (0612)	Area (ha)=	2.18	
ID= 1 DT= 5.0 min	Total Imp(%)=	94.00	Dir. Conn.(%)= 94.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	2.05	0.13
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	120.55	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70

1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 34.29
over (min) 5.00 10.00
Storage Coeff. (min)= 2.80 (ii) 5.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.28 0.15
TOTALS
PEAK FLOW (cms)= 0.59 0.01 0.605 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 17.04 58.93
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.25 0.87

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

OVERFLOW IS OFF				
RESERVOIR(0295)				
IN= 2----> OUT= 1				
DT= 5.0 min				
	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1000	0.1464
	0.0159	0.0631	0.0000	0.0000
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0612)	2.180	0.605	3.00	58.93
OUTFLOW: ID= 1 (0295)	2.180	0.048	3.58	58.46

PEAK FLOW REDUCTION [Qout/Qin](%)= 7.89
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0946

ADD HYD (0306)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0292):	1.26	0.027	3.58	58.11
+ ID2= 2 (0295):	2.18	0.048	3.58	58.46
=====				
ID = 3 (0306):	3.44	0.075	3.58	58.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0306):	3.44	0.075	3.58	58.33
+ ID2= 2 (0606):	1.98	0.394	3.00	46.00
=====				
ID = 1 (0306):	5.42	0.438	3.00	53.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304)	
IN= 2----> OUT= 1	
Routing time step (min)= 5.00	

<----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning	
0.00	92.50	0.0700	
36.57	92.00	0.0700	
90.03	91.00	0.0700	
124.58	90.00	0.0700 / 0.0350	Main Channel
128.34	89.59	0.0350	Main Channel
129.84	89.59	0.0350	Main Channel
132.39	90.00	0.0350 / 0.0700	Main Channel
163.76	91.00	0.0700	
187.47	91.00	0.0700	
203.83	91.00	0.0700	
306.44	92.00	0.0700	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08

1.500 4.06 | 3.000 105.46 | 4.500 5.41 | 6.00 2.70

Max.Eff.Inten.(mm/hr)=	105.46	48.04
over (min)	5.00	15.00
Storage Coeff. (min)=	1.73 (ii)	13.38 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.32	0.08
TOTALS		
PEAK FLOW (cms)=	0.10	0.01
TIME TO PEAK (hrs)=	3.00	3.00
RUNOFF VOLUME (mm)=	61.60	27.90
TOTAL RAINFALL (mm)=	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.41

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6102)	
ID= 1 DT= 5.0 min	
Area (ha)=	2.49
Total Imp(%)=	78.00
Dir. Conn.(%)=	50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.94	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	128.84	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70

1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0306)	5.42	0.44	3.00	53.83	0.21
OUTFLOW: ID= 1 (0304)	5.42	0.21	3.08	53.82	0.14

CALIB	
STANDHYD (0616)	
ID= 1 DT= 5.0 min	
Area (ha)=	0.44
Total Imp(%)=	78.00
Dir. Conn.(%)=	78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.34	0.10
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	54.16	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	192.38
over (min)	5.00	10.00
Storage Coeff. (min)=	2.91 (ii)	9.60 (ii)
Unit Hyd. Tpeak (min)=	5.00	10.00
Unit Hyd. peak (cms)=	0.28	0.11

- *TOTALS*
- PEAK FLOW (cms)= 0.36 0.21 0.572 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 61.60 44.05 52.82
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.65 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0624)	
ID= 1 DT= 5.0 min	
Area (ha)=	0.89
Total Imp(%)=	78.00
Dir. Conn.(%)=	78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.69	0.20
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	77.03	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 48.04
over (min) 5.00 15.00
Storage Coeff. (min)= 2.14 (ii) 13.79 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

TOTALS
PEAK FLOW (cms)= 0.20 0.02 0.217 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.90 54.17
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0286)						
1 + 2 = 3						
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (6102):		2.49	0.572	3.00	52.82	
+ ID2= 2 (0616):		0.44	0.107	3.00	54.17	
=====						
ID = 3 (0286):		2.93	0.679	3.00	53.02	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0286)				
3 + 2 = 1				
		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
ID1= 3 (0286):		2.93	0.679	3.00
+ ID2= 2 (0624):		0.89	0.217	3.00
=====				
ID = 1 (0286):		3.82	0.896	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0305)				
IN= 2---> OUT= 1				
DT= 5.0 min				
OVERFLOW IS OFF				
		OUTFLOW	STORAGE	OUTFLOW
		(cms)	(ha.m.)	(cms)
		0.0000	0.0000	0.1760
		0.0280	0.0927	0.0000
		0.0000	0.0000	0.2330
		0.0280	0.0927	0.0000
		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
INFLOW : ID= 2 (0286)		3.820	0.896	3.00
OUTFLOW: ID= 1 (0305)		3.820	0.083	3.75
=====				
PEAK FLOW REDUCTION [Qout/Qin](%)= 9.21				
TIME SHIFT OF PEAK FLOW (min)= 45.00				
MAXIMUM STORAGE USED (ha.m.)= 0.1444				

CALIB				
STANDHYD (0619)				
ID= 1 DT= 5.0 min				
Area (ha)= 1.64				
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00				
=====				
		IMPERVIOUS	PERVIOUS (i)	
Surface Area		(ha)=	1.07	0.57
Dep. Storage		(mm)=	6.00	8.00
Average Slope		(%)=	1.00	1.00
Length		(m)=	104.56	40.00
Mannings n		=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06

0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 55.30
over (min) 5.00 15.00
Storage Coeff. (min)= 2.57 (ii) 13.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS
PEAK FLOW (cms)= 0.31 0.06 0.358 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 31.83 51.17
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.47 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0293)						
1 + 2 = 3						
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0302):		15.05	0.310	3.75	45.58	
+ ID2= 2 (0304):		5.42	0.213	3.08	53.82	
=====						
ID = 3 (0293):		20.47	0.470	3.50	47.76	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)				
3 + 2 = 1				
		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
ID1= 3 (0293):		20.47	0.470	3.50
+ ID2= 2 (0305):		3.82	0.083	3.75
=====				
ID = 1 (0293):		24.29	0.552	3.58

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)				
1 + 2 = 3				
		AREA	QPEAK	TPEAK
		(ha)	(cms)	(hrs)
ID1= 1 (0293):		24.29	0.552	3.58
+ ID2= 2 (0619):		1.64	0.358	3.00
=====				
ID = 3 (0293):		25.93	0.739	3.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0632)				
ID= 1 DT= 5.0 min				
Area (ha)= 29.63				
Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00				
=====				
		IMPERVIOUS	PERVIOUS (i)	
Surface Area		(ha)=	13.93	15.70
Dep. Storage		(mm)=	1.50	8.00
Average Slope		(%)=	1.00	1.00
Length		(m)=	444.45	40.00
Mannings n		=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70

0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 59.29
over (min) 5.00 20.00
Storage Coeff. (min)= 6.12 (ii) 16.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.06

TOTALS

PEAK FLOW (cms)= 2.57 1.49 3.591 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 66.10 27.22 39.66
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.98 0.40 0.59

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R. V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0293):	25.93	0.739	3.00	48.76
+ ID2= 2 (0603):	111.60	1.507	4.58	18.86
=====				
ID = 3 (0128):	137.53	2.001	4.50	24.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)							
3 + 2 = 1							
	AREA	QPEAK	TPEAK	R.V.			
	(ha)	(cms)	(hrs)	(mm)			
ID1= 3 (0128):	137.53	2.001	4.50	24.50			

+ ID2= 2 (6032): 29.63 3.591 3.00 39.66
=====

ID = 1 (0128): 167.16 4.740 3.00 27.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0604) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->				
Distance	Elevation	Manning		
0.00	86.75	0.0900		
3.09	87.40	0.0900		
18.33	87.41	0.0900		
35.33	86.99	0.0900		
73.84	86.75	0.0900		
103.33	86.41	0.0900		
120.33	86.11	0.0900		
129.46	86.13	0.0900		
143.37	85.32	0.0900		
154.33	85.02	0.0900		
161.57	85.09	0.0900		
163.05	84.78	0.0900 / 0.0700	Main Channel	
166.55	83.78	0.0700	Main Channel	
168.05	84.78	0.0700 / 0.1100	Main Channel	
172.02	85.29	0.1100		
191.39	86.19	0.1100		
270.18	85.78	0.1100		
296.33	86.36	0.1100		
324.34	86.68	0.1100		
368.56	87.05	0.1100		

<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.17	83.95	.465E+02	0.0	0.03	432.88		
0.33	84.11	.186E+03	0.0	0.04	272.70		
0.50	84.28	.418E+03	0.0	0.05	208.11		
0.67	84.45	.743E+03	0.1	0.06	171.79		
0.83	84.61	.116E+04	0.1	0.08	148.04		
1.00	84.78	.167E+04	0.2	0.09	131.10		
1.20	84.98	.252E+04	0.4	0.10	110.62		
1.41	85.19	.469E+04	0.6	0.09	121.59		
1.61	85.39	.842E+04	1.1	0.09	126.63		
1.81	85.59	.133E+05	1.8	0.09	121.99		
2.01	85.79	.192E+05	2.7	0.10	116.68		
2.22	86.00	.298E+05	4.0	0.09	125.45		
2.42	86.20	.487E+05	5.6	0.08	143.80		
2.62	86.40	.736E+05	9.0	0.08	137.02		

2.82	86.60	.102E+06	13.1	0.09	130.82		
3.03	86.81	.136E+06	18.1	0.09	125.42		
3.23	87.01	.178E+06	24.4	0.09	121.07		
3.43	87.21	.224E+06	34.2	0.10	108.80		
3.63	87.41	.271E+06	44.8	0.11	100.89		

<---- hydrograph ----> <-pipe / channel->							
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0128)	167.16	4.74	3.00	27.18	2.31	0.08	
OUTFLOW: ID= 1 (0604)	167.16	1.93	4.50	27.18	1.90	0.09	

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB							
STANDHYD (6042)							
ID= 1 DT= 5.0 min							
	Area	(ha)=	24.00				
	Total Imp(%)=	78.00	Dir. Conn.(%)=	69.00			

IMPERVIOUS PERVIOUS (i)							
Surface Area	(ha)=	18.72	5.28				
Dep. Storage	(mm)=	6.00	8.00				
Average Slope	(%)=	1.00	1.00				
Length	(m)=	400.00	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70

1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 98.27
over (min) 5.00 15.00
Storage Coeff. (min)= 5.75 (ii) 14.50 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 4.54 0.80 5.210 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 34.91 53.33
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.52 0.79

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)					
1 + 2 = 3					

	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0604):	167.16	1.931	4.50	27.18	
+ ID2= 2 (6042):	24.00	5.210	3.00	53.33	
=====					
ID = 3 (0130):	191.16	6.677	3.00	30.46	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0605) |
| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (801.4) ----->							
Distance	Elevation	Manning					
0.00	82.95	0.1100					
3.78	82.95	0.1100					
9.24	82.49	0.1100					
50.67	82.10	0.1100					
105.12	82.17	0.1100					
119.34	81.56	0.1100					
150.67	81.66	0.1100					
157.23	82.37	0.1100					
190.03	82.57	0.1100					

223.75 82.27 0.1100
252.32 82.50 0.1100
254.65 81.95 0.1100 / 0.0700 Main Channel
258.15 80.95 0.0700 Main Channel
259.65 81.95 0.0700 / 0.1100 Main Channel
263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0130) 191.16 6.68 3.00 30.46 1.06 0.36
OUTFLOW: ID= 1 (0605) 191.16 2.84 3.50 30.46 0.88 0.28

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min
Area (ha)= 11.40
Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00
IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 8.21 3.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Max.Eff.Inten.(mm/hr)= 105.46 83.50
over (min) 5.00 15.00
Storage Coeff. (min)= 4.60 (ii) 13.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08
PEAK FLOW (cms)= 1.99 0.41 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 2.333 (iii)
RUNOFF VOLUME (mm)= 61.60 30.68 3.00
TOTAL RAINFALL (mm)= 67.60 67.60 49.85
RUNOFF COEFFICIENT = 0.91 0.45 67.60
0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)
1 + 2 = 3
ID1= 1 (0605): 191.16 2.840 3.50 30.46
+ ID2= 2 (6112): 11.40 2.333 3.00 49.85
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min
Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Max.Eff.Inten.(mm/hr)= 105.46 54.20
over (min) 5.00 20.00
Storage Coeff. (min)= 5.08 (ii) 16.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06
PEAK FLOW (cms)= 2.88 0.36 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 3.124 (iii)
RUNOFF VOLUME (mm)= 61.60 23.93 3.00
TOTAL RAINFALL (mm)= 67.60 67.60 48.42
RUNOFF COEFFICIENT = 0.91 0.35 67.60
0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)
1 + 2 = 3
ID1= 1 (0139): 202.56 4.550 3.00 31.55
+ ID2= 2 (6052): 15.90 3.124 3.00 48.42
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) ----->			
Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 / 0.0700	Main Channel

118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 / 0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ---->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.46	7.67	3.00	0.73	0.72
OUTFLOW: ID= 1 (0530)	218.46	5.99	3.08	0.65	0.68

CALIB	
STANDHYD (5302)	
ID= 1 DT= 5.0 min	

Area (ha)= 5.80	
Total Imp(%)= 66.00	Dir. Conn.(%)= 56.00

IMPERVIOUS			PERVIOUS (i)	
Surface Area	(ha)=	3.83	1.97	
Dep. Storage	(mm)=	6.00	8.00	

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Max.Eff.Inten.(mm/hr)= 105.46 50.53
over (min)= 5.00 20.00
Storage Coeff. (min)= 3.75 (ii) 15.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.25 0.07

PEAK FLOW (cms)= 0.93 0.17 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 1.043 (iii)
RUNOFF VOLUME (mm)= 61.60 23.21 44.71
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.34 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)					
1	2	=	3		

ID1= 1 (0530):		218.46	5.988	3.08	32.78
+ ID2= 2 (0530):		5.80	1.043	3.00	44.71
=====					
ID = 3 (0134):		224.26	6.572	3.00	33.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (	0120):	273.94	12.334	3.00	35.24
+ ID2= 2 (	0134):	224.26	6.572	3.00	33.09
=====					
ID = 3 (	0135):	498.20	18.905	3.00	34.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	
IN= 2----> OUT= 1	

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->			
Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->				<-pipe / channel->		
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.20	18.91	3.00	34.27	2.09	0.90
OUTFLOW: ID= 1 (0507)	498.20	14.45	3.17	34.27	1.87	0.84

CALIB	
STANDHYD (5072)	
ID= 1 DT= 5.0 min	

Area (ha)= 48.90	
Total Imp(%)= 50.00	Dir. Conn.(%)= 36.00

IMPERVIOUS			PERVIOUS (i)	
Surface Area	(ha)=	24.45	24.45	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	570.96	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06	
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06	
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06	
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06	
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06	
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06	
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70	
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70	
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70	
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70	
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70	
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70	
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70	
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70	
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70	
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70	
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70	
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70	

Max.Eff.Inten.(mm/hr)= 105.46 73.92
over (min) 5.00 20.00
Storage Coeff. (min)= 7.11 (ii) 16.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.17 0.06

TOTALS
PEAK FLOW (cms)= 4.65 2.44 6.334 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 28.72 40.55
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.42 0.60

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5402)
ID= 1 DT= 5.0 min
Area (ha)= 9.40
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS (i)
Surface Area (ha)= 4.70
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 250.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs	mm/hr	
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06		
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06		
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06		
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06		
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06		
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06		
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70		
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70		
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70		
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70		
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70		
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70		
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70		
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70		
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70		
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70		
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70		
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70		

Max.Eff.Inten.(mm/hr)= 105.46 50.94
over (min) 5.00 20.00
Storage Coeff. (min)= 4.34 (ii) 15.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.07
TOTALS
PEAK FLOW (cms)= 0.93 0.39 1.198 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 23.29 36.70
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.34 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min
AREA (ha)= 30.00
QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 402.14

TIME	FLOW	TIME	FLOW	TIME	FLOW	'	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16	
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16	
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16	
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16	
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17	
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16	
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16	
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17	
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15	
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16	
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16	
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16	
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16	
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16	
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17	
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16	
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16	
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17	
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17	
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17	
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17	
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17	
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18	
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17	
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18	
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18	
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16	
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18	
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17	
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18	
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17	
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17	

2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17

6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.15
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.16
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	

11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15
11.17	0.00	42.50	0.26	73.83	0.59	105.17	0.16	136.50	0.15
11.25	0.00	42.58	0.26	73.92	0.57	105.25	0.16	136.58	0.15
11.33	0.00	42.67	0.26	74.00	0.57	105.33	0.16	136.67	0.14
11.42	0.00	42.75	0.25	74.08	0.57	105.42	0.16	136.75	0.15
11.50	0.00	42.83	0.26	74.17	0.56	105.50	0.16	136.83	0.14
11.58	0.00	42.92	0.25	74.25	0.58	105.58	0.16	136.92	0.14
11.67	0.00	43.00	0.25	74.33	0.58	105.67	0.16	137.00	0.14
11.75	0.00	43.08	0.25	74.42	0.58	105.75	0.17	137.08	0.15
11.83	0.00	43.17	0.25	74.50	0.59	105.83	0.16	137.17	0.14
11.92	0.00	43.25	0.25	74.58	0.60	105.92	0.16	137.25	0.15
12.00	0.00	43.33	0.25	74.67	0.57	106.00	0.16	137.33	0.15
12.08	0.00	43.42	0.25	74.75	0.56	106.08	0.16	137.42	0.14
12.17	0.00	43.50	0.25	74.83	0.54	106.17	0.16	137.50	0.14
12.25	0.00	43.58	0.25	74.92	0.56	106.25	0.17	137.58	0.14
12.33	0.00	43.67	0.25	75.00	0.53	106.33	0.16	137.67	0.15
12.42	0.00	43.75	0.25	75.08	0.51	106.42	0.16	137.75	0.14
12.50	0.00	43.83	0.26	75.17	0.51	106.50	0.16	137.83	0.14
12.58	0.00	43.92	0.26	75.25	0.51	106.58	0.16	137.92	0.14
12.67	0.00	44.00	0.26	75.33	0.51	106.67	0.16	138.00	0.14
12.75	0.00	44.08	0.26	75.42	0.50	106.75	0.16	138.08	0.14
12.83	0.00	44.17	0.26	75.50	0.50	106.83	0.15	138.17	0.14
12.92	0.00	44.25	0.27	75.58	0.49	106.92	0.15	138.25	0.14
13.00	0.00	44.33	0.26	75.67	0.49	107.00	0.16	138.33	0.14
13.08	0.00	44.42	0.26	75.75	0.49	107.08	0.16	138.42	0.14
13.17	0.00	44.50	0.26	75.83	0.48	107.17	0.16	138.50	0.14
13.25	0.00	44.58	0.26	75.92	0.47	107.25	0.15	138.58	0.14
13.33	0.00	44.67	0.26	76.00	0.47	107.33	0.16	138.67	0.14
13.42	0.00	44.75	0.26	76.08	0.48	107.42	0.16	138.75	0.14
13.50	0.00	44.83	0.26	76.17	0.46	107.50	0.15	138.83	0.14
13.58	0.00	44.92	0.26	76.25	0.45	107.58	0.16	138.92	0.14
13.67	0.00	45.00	0.26	76.33	0.45	107.67	0.15	139.00	0.14
13.75	0.00	45.08	0.26	76.42	0.43	107.75	0.15	139.08	0.14
13.83	0.00	45.17	0.25	76.50	0.44	107.83	0.16	139.17	0.13
13.92	0.00	45.25	0.25	76.58	0.46	107.92	0.16	139.25	0.14
14.00	0.00	45.33	0.25	76.67	0.43	108.00	0.16	139.33	0.14
14.08	0.00	45.42	0.25	76.75	0.44	108.08	0.15	139.42	0.14
14.17	0.00	45.50	0.25	76.83	0.43	108.17	0.15	139.50	0.14
14.25	0.00	45.58	0.25	76.92	0.45	108.25	0.15	139.58	0.13
14.33	0.00	45.67	0.25	77.00	0.42	108.33	0.16	139.67	0.14
14.42	0.00	45.75	0.25	77.08	0.43	108.42	0.16	139.75	0.14
14.50	0.00	45.83	0.26	77.17	0.43	108.50	0.15	139.83	0.13
14.58	0.00	45.92	0.25	77.25	0.42	108.58	0.15	139.92	0.14
14.67	0.00	46.00	0.26	77.33	0.41	108.67	0.15	140.00	0.14
14.75	0.00	46.08	0.26	77.42	0.41	108.75	0.16	140.08	0.13
14.83	0.00	46.17	0.25	77.50	0.41	108.83	0.15	140.17	0.13
14.92	0.69	46.25	0.26	77.58	0.43	108.92	0.15	140.25	0.13
15.00	0.69	46.33	0.26	77.67	0.39	109.00	0.15	140.33	0.13
15.08	0.71	46.42	0.26	77.75	0.39	109.08	0.15	140.42	0.14

15.17	0.74	46.50	0.26	77.83	0.37	109.17	0.15	140.50	0.13
15.25	0.74	46.58	0.26	77.92	0.39	109.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.24	81.00	0.32	112.33	0.15	143.67	0.12
18.42	0.39	49.75	0.23	81.08	0.31	112.42	0.14	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12

19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11

23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10

27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		
STORE HYD(1605)		AREA	(ha)=	30.00					
ID= 1 DT= 5.0min		QPEAK	(cms)=	1.37					
		TPEAK	(hrs)=	71.92					
		VOLUME	(mm)=	625.27					

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26

8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21

12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17

16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14

20.68	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.57	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12

24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.66	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11

28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

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V   V   I   SSSSS   U   U   A   L   (v 6.2.2018)
V   V   I   SS      U   U   A   A   L
V   V   I   SS      U   U   AAAAA   L
V   V   I   SS      U   U   A   A   L
W   I   SSSSS   UUUUU   A   A   LLLLL

000   TTTT   TTTT   H   H   Y   Y   M   M   000   TM
O   O   T   T   H   H   Y   Y   M   M   O   O
O   O   T   T   H   H   Y   Y   M   M   O   O
000   T   T   H   H   Y   Y   M   M   000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:
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Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\VH5\860df144-956f-4cfc-88fc-f31f1a71e94a\ f83f80d8-3bd6-4ec8-b87d-c73ccdda2fa0\

DATE: 04-10-2024 TIME: 01:42:42

USER:

COMMENTS:

** SIMULATION : 25yrII6.stm **

READ STORM
Filename: C:\Users\jannaormond\AppData\Local\Temp\fc287717-ea81-4509-917c-0fddd7b9a7f0\e0d06e36
Ptotal= 81.60 mm
Comments: Mount Hope-6 hour SCS Distribution Desig

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	3.26	1.50	8.16	3.00	17.95	4.50	4.90
0.17	3.26	1.67	8.16	3.17	17.95	4.67	4.90
0.33	3.26	1.83	8.16	3.33	17.95	4.83	4.90
0.50	4.90	2.00	9.79	3.50	8.16	5.00	3.26
0.67	4.90	2.17	9.79	3.67	8.16	5.17	3.26
0.83	4.90	2.33	9.79	3.83	8.16	5.33	3.26
1.00	4.90	2.50	48.96	4.00	6.53	5.50	3.26
1.17	4.90	2.67	88.13	4.17	6.53	5.67	3.26
1.33	4.90	2.83	127.30	4.33	6.53	5.83	3.26

CALIB
NASHYD (5011)
ID= 1 DT= 5.0 min
Area (ha)= 80.20
Ia (mm)= 8.00
Curve Number (CN)= 65.0
of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 2.505 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 25.750
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.316

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 37.32
Total Imp(%)= 38.00
Dir. Conn.(%)= 24.00

IMPERVIOUS
Surface Area (ha)= 14.18
Dep. Storage (mm)= 6.00
Average Slope (%)= 1.00
Length (m)= 498.80
Mannings n = 0.013
PERVIOUS (i)
23.14
8.00
1.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 73.75
over (min) 5.00 20.00
Storage Coeff. (min)= 6.08 (ii) 15.90 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.07

TOTALS

PEAK FLOW (cms)= 2.94 2.36 4.560 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 30.20 41.09
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.37 0.50

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)

ID1= 1 (5011): 80.20 2.505 3.83 25.75
+ ID2= 2 (5012): 37.32 4.560 3.00 41.09
=====

ID = 3 (0100): 117.52 5.124 3.00 30.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (1537.5) ----->			
Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 /0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 /0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.484E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49

1.44 88.28 .346E+05 15.5 0.53 37.18
1.56 88.40 .484E+05 22.8 0.56 35.35
1.67 88.51 .634E+05 32.1 0.60 32.90
1.79 88.63 .807E+05 41.2 0.61 32.65
1.90 88.74 .101E+06 54.6 0.64 30.77
2.02 88.86 .124E+06 64.7 0.62 31.85

		<--- hydrograph <--->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0100)	117.52	5.12	3.00	30.62	1.13	0.61
OUTFLOW: ID= 1 (0502)	117.52	3.73	3.83	30.62	1.04	0.75

TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 26.759
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.328

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area	(ha)=	3.67	Curve Number (CN)=	68.8
NASHYD (5021)	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.43			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

CALIB	Area	(ha)=	2.30	Curve Number (CN)=	69.3
NASHYD (5691)	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.07			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 1.220
PEAK FLOW (cms)= 0.343 (i)

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.328
PEAK FLOW (cms)= 0.211 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 28.731
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.352

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5092)
ID= 1 DT= 5.0 min

Area (ha)= 1.73
Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.88
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.42 (ii) 11.74 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.31 0.12 0.410 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 41.57 58.79
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

TOTALS
PEAK FLOW (cms)= 0.16 0.03 0.182 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 30.25 59.27
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.37 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5682)
ID= 1 DT= 5.0 min

Area (ha)= 0.53
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5082)
ID= 1 DT= 5.0 min

Area (ha)= 0.71
Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.52 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 68.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 80.08
over (min)= 5.00 15.00
Storage Coeff. (min)= 1.85 (ii) 11.35 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 42.58
over (min)= 5.00 15.00
Storage Coeff. (min)= 1.70 (ii) 13.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.08

TOTALS
PEAK FLOW (cms)= 0.12 0.01 0.133 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 25.39 58.01
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.31 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min

Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26

0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 35.37
over (min) 5.00 20.00
Storage Coeff. (min)= 3.56 (ii) 16.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.06

PEAK FLOW (cms)= 0.91 0.20
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 75.60 21.28
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.26

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0510)	Area (ha)= 0.76		
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.59	0.17	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	71.18	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 72.24
over (min) 5.00 15.00
Storage Coeff. (min)= 1.91 (ii) 11.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.18 0.03
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 35.78
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.44

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 83.88
over (min) 5.00 10.00
Storage Coeff. (min)= 1.89 (ii) 6.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.14

TOTALS

PEAK FLOW (cms)= 0.21 0.03
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 41.57
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5752)	Area (ha)= 0.78		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.51	0.27	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	72.11	40.00	

STANDHYD (5282)	Area (ha)= 2.08		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.35	0.73	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	117.76	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 84.64
over (min) 5.00 15.00
Storage Coeff. (min)= 2.56 (ii) 11.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS

PEAK FLOW (cms)= 0.48 0.10
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 41.96
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

- CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0501):	6.23	1.040	3.00	44.09
+ ID2= 2 (5021):	3.67	0.211	3.33	28.73
=====				
ID = 3 (0481):	9.90	1.154	3.00	38.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	9.90	1.154	3.00	38.40
+ ID2= 2 (5082):	0.71	0.182	3.00	59.27
=====				
ID = 1 (0481):	10.61	1.336	3.00	39.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	10.61	1.336	3.00	39.80
+ ID2= 2 (5092):	1.73	0.410	3.00	58.79
=====				
ID = 3 (0481):	12.34	1.746	3.00	42.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	12.34	1.746	3.00	42.46
+ ID2= 2 (0510):	0.76	0.240	3.00	68.11
=====				

ID = 1 (0481): 13.10 1.985 3.00 43.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	13.10	1.985	3.00	43.95
+ ID2= 2 (5282):	2.08	0.563	3.00	63.82
=====				
ID = 3 (0481):	15.18	2.548	3.00	46.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	15.18	2.548	3.00	46.67
+ ID2= 2 (5682):	0.53	0.133	3.00	58.01
=====				
ID = 1 (0481):	15.71	2.681	3.00	47.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	15.71	2.681	3.00	47.05
+ ID2= 2 (5691):	2.30	0.343	3.00	26.76
=====				
ID = 3 (0481):	18.01	3.024	3.00	44.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	18.01	3.024	3.00	44.46
+ ID2= 2 (5752):	0.78	0.206	3.00	61.66
=====				
ID = 1 (0481):	18.79	3.230	3.00	45.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)				
ID= 1 DT= 5.0 min		Area (ha)=	7.22	Curve Number (CN)= 80.7
		Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)=	0.20	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 1.012 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 40.194
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.493

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
NASHYD (0522)				
ID= 1 DT= 5.0 min		Area (ha)=	3.31	Curve Number (CN)= 63.1
		Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
		U.H. Tp(hrs)=	0.16	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.299 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 24.249
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.297

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0580)				
ID= 1 DT= 5.0 min		Area (ha)=	1.87	
		Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00

		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.22	0.65	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	111.65	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 42.58
over (min) 5.00 15.00
Storage Coeff. (min)= 2.48 (ii) 14.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS

PEAK FLOW (cms)= 0.43 0.05 0.467 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 25.39 58.02
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.31 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0519)	Area (ha)= 2.08		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	
	IMPERVIOUS	PERVIOUS (i)	

Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 40.75
over (min) 5.00 20.00
Storage Coeff. (min)= 2.56 (ii) 15.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.29 0.07

TOTALS

PEAK FLOW (cms)= 0.48 0.05 0.508 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 24.35 57.66
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0529)	Area (ha)= 1.80		
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00	Dir. Conn.(%)= 78.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)= 1.40 0.40			
Dep. Storage (mm)= 6.00 8.00			
Average Slope (%)= 1.00 1.00			
Length (m)= 109.54 40.00			
Mannings n = 0.013 0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 48.76
over (min) 5.00 10.00
Storage Coeff. (min)= 2.45 (ii) 7.21 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS

PEAK FLOW (cms)= 0.49 0.04 0.533 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 24.35 64.32
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0519):	2.08	0.508	3.00	57.66
+ ID2= 2 (0529):	1.80	0.533	3.00	64.32
=====				
ID = 3 (0267):	3.88	1.041	3.00	60.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0267):	3.88	1.041	3.00	60.75
+ ID2= 2 (0580):	1.87	0.467	3.00	58.02
=====				
ID = 1 (0267):	5.75	1.508	3.00	59.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0267):	5.75	1.508	3.00	59.86
+ ID2= 2 (0522):	3.31	0.299	3.00	24.25
=====				
ID = 3 (0265):	9.06	1.807	3.00	46.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0523)	Area (ha)= 6.61		
ID= 1 DT= 5.0 min	Total Imp(%)= 75.00	Dir. Conn.(%)= 50.00	

Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 154.85
over (min) 5.00 15.00
Storage Coeff. (min)= 3.62 (ii) 10.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
PEAK FLOW (cms)= 1.14 0.45
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 39.60
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.49

TOTALS
1.525 (iii)
3.00
57.60
81.60
0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0260) |
| 1 + 2 = 3 | AREA (ha)= QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0265): 9.06 1.807 3.00 46.85
+ ID2= 2 (0523): 6.61 1.525 3.00 57.60
===== ID = 3 (0260): 15.67 3.333 3.00 51.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (0525) | Area (ha)= 1.45
| ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26

1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 71.29
over (min) 5.00 15.00
Storage Coeff. (min)= 2.30 (ii) 12.24 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09
PEAK FLOW (cms)= 0.33 0.06
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 35.32
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43

TOTALS
0.381 (iii)
3.00
61.50
81.60
0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| STANDHYD (0527) | Area (ha)= 1.68
| ID= 1 DT= 5.0 min | Total Imp(%)= 76.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.28 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 105.83 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 207.52
over (min) 5.00 10.00
Storage Coeff. (min)= 2.40 (ii) 8.89 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12
PEAK FLOW (cms)= 0.31 0.17
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 54.26
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.66

TOTALS
0.480 (iii)
3.00
65.36
81.60
0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0270)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0264):	24.34	4.650	3.00	48.67
+ ID2= 2 (0527):	1.68	0.480	3.00	65.36
=====				
ID = 3 (0270):	26.02	5.130	3.00	49.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (5202)				
ID= 1 DT= 5.0 min				
	Area (ha)=	2.27		
	Total Imp(%)=	61.00	Dir. Conn.(%)=	61.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.38	0.89		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	123.02	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26

1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	75.92	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.63 (ii)	12.33 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.29	0.08	
TOTALS			
PEAK FLOW (cms)=	0.49	0.11	0.578 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	75.60	37.60	60.78
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.46	0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0273)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0270):	26.02	5.130	3.00	49.75
+ ID2= 2 (5202):	2.27	0.578	3.00	60.78
=====				
ID = 3 (0273):	28.29	5.708	3.00	50.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0274)				
IN= 2---> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1400	0.8343
	0.0195	0.2416	0.2360	1.0014
	0.0700	0.5564	0.3420	1.6616
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0273)	28.290	5.708	3.00	50.63

OUTFLOW: ID= 1 (0274) 28.290 0.262 5.08 50.42

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.59
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 1.1634

CALIB				
STANDHYD (0526)				
ID= 1 DT= 5.0 min				
	Area (ha)=	0.94		
	Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.73	0.21		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	79.16	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	76.18	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.02 (ii)	6.77 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.31	0.14	

TOTALS

PEAK FLOW (cms)=	0.26	0.03	0.292 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	37.73	67.26
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.46	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279)				
IN= 2---> OUT= 1				
DT= 5.0 min				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0476	0.0432
	0.0096	0.0220	0.0579	0.0480
	0.0206	0.0306	0.0671	0.0528
	0.0297	0.0360	0.0000	0.0000
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0526)	0.940	0.292	3.00	67.26
OUTFLOW: ID= 1 (0279)	0.940	0.043	3.50	66.65

PEAK FLOW REDUCTION [Qout/Qin](%)= 14.58
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0412

CALIB				
STANDHYD (0574)				
ID= 1 DT= 5.0 min				
	Area (ha)=	1.44		
	Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.12	0.32		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	97.98	40.00		
Mannings n =	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 62.49
over (min) 5.00 10.00
Storage Coeff. (min)= 2.29 (ii) 7.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS
PEAK FLOW (cms)= 0.40 0.04 0.437 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 31.02 65.79
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.38 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276)	OVERFLOW IS OFF			
IN= 2----> OUT= 1				
DT= 5.0 min				

	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.0730	0.0642
	0.0150	0.0327	0.0890	0.0712

0.0310 0.0455 | 0.1030 0.0784
0.0450 0.0536 | 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0574) 1.440 0.437 3.00 65.79
OUTFLOW: ID= 1 (0276) 1.440 0.065 3.50 65.41

PEAK FLOW REDUCTION [Qout/Qin](%)= 14.96
TIME SHIFT OF PEAK FLOW (min)= 30.00
MAXIMUM STORAGE USED (ha.m.)= 0.0613

ADD HYD (0275)				
1 + 2 = 3				

ID1= 1 (0276):	1.44	0.065	3.50	65.41
+ ID2= 2 (0279):	0.94	0.043	3.50	66.65
=====				
ID = 3 (0275):	2.38	0.108	3.50	65.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0571)	Area (ha)=	19.59	
ID= 1 DT= 5.0 min	Total Imp(%)=	68.00	Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 13.32 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26

0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 106.47
over (min) 5.00 15.00
Storage Coeff. (min)= 5.01 (ii) 13.49 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08

TOTALS
PEAK FLOW (cms)= 3.30 1.05 4.173 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.51 55.05
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.42 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0572)			
ID= 1 DT= 5.0 min			

	Area (ha)=	11.31	
	Total Imp(%)=	71.00	Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 161.29
over (min) 5.00 15.00
Storage Coeff. (min)= 4.25 (ii) 11.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

TOTALS
PEAK FLOW (cms)= 1.94 0.93 2.736 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 48.02 61.81
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.59 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0282)					
1 + 2 = 3					
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0571):		19.59	4.173	3.00	55.05
+ ID2= 2 (0572):		11.31	2.736	3.00	61.81
=====					
ID = 3 (0282):		30.90	6.909	3.00	57.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0573)
ID= 1 DT= 5.0 min

Area (ha)= 2.66
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.60 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 58.06
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.75 (ii) 13.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.08

TOTALS

PEAK FLOW (cms)= 0.56 0.11 0.653 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 34.03 58.97
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.42 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0285)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0282):	30.90	6.909	3.00	57.53
+ ID2= 2 (0573):	2.66	0.653	3.00	58.97
=====				
ID = 3 (0285):	33.56	7.562	3.00	57.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0280)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2300	1.1312
0.0230	0.3704	0.2810	1.3850
0.0900	0.8066	0.4120	2.2335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0285)	33.560	7.562	3.00	57.64
OUTFLOW: ID= 1 (0280)	33.560	0.314	5.17	56.97

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.16
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.6003

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0274):	28.29	0.262	5.08	50.42
+ ID2= 2 (0275):	2.38	0.108	3.50	65.90
=====				
ID = 3 (0102):	30.67	0.349	3.58	51.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	30.67	0.349	3.58	51.62
+ ID2= 2 (0280):	33.56	0.314	5.17	56.97
=====				
ID = 1 (0102):	64.23	0.645	4.00	54.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0102):	64.23	0.645	4.00	54.41
+ ID2= 2 (0481):	18.79	3.230	3.00	45.17
=====				
ID = 3 (0102):	83.02	3.496	3.00	52.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	83.02	3.496	3.00	52.32
+ ID2= 2 (0502):	117.52	3.728	3.83	30.62
=====				
ID = 1 (0102):	200.54	5.418	3.00	39.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 / 0.0700

Main Channel

127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 / 0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0102)	200.54	5.42	3.00	39.60	1.24	1.07
OUTFLOW: ID= 1 (0503)	200.54	4.99	3.50	39.60	1.20	1.05

CALIB

| STANDHYD (5032)| Area (ha)= 13.80
|ID= 1 DT= 5.0 min | Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.49 3.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 103.62
over (min) 5.00 15.00
Storage Coeff. (min)= 4.51 (ii) 13.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08
TOTALS
PEAK FLOW (cms)= 3.15 0.55 3.609 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 37.97 63.18
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.47 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0104)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0503): 200.54 4.987 3.50 39.60
+ ID2= 2 (5032): 13.80 3.609 3.00 63.18
===== ID = 3 (0104): 214.34 8.093 3.00 41.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0504)|
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00
----- DATA FOR SECTION (815.4) -----
Distance Elevation Manning
19.10 82.03 0.0900
29.01 83.14 0.0900
40.83 82.56 0.0900
81.51 82.27 0.0900
122.18 82.68 0.0900
169.31 82.61 0.0900
217.10 82.90 0.0900
229.61 83.66 0.0900 /0.0700 Main Channel
232.80 81.85 0.0700 Main Channel
243.24 83.87 0.0700 Main Channel
257.77 84.06 0.0900
312.01 83.52 0.0900
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900
513.93 82.96 0.0900
526.85 83.23 0.0900
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 81.96 .117E+02 0.0 0.18 23.95
0.23 82.08 .492E+02 0.1 0.28 15.67

0.34 82.19 .135E+03 0.2 0.34 13.00
0.45 82.30 .312E+03 0.4 0.32 13.44
0.57 82.42 .116E+04 1.2 0.28 15.74
0.68 82.53 .287E+04 3.5 0.32 13.85
0.79 82.64 .549E+04 7.0 0.33 13.13
0.91 82.76 .101E+05 14.9 0.39 11.28
1.02 82.87 .155E+05 27.5 0.47 9.38
1.13 82.98 .214E+05 45.2 0.55 7.89
1.25 83.10 .277E+05 67.2 0.64 6.87
1.36 83.21 .344E+05 93.6 0.71 6.12
1.47 83.32 .426E+05 125.3 0.77 5.67
1.59 83.44 .516E+05 162.2 0.82 5.30
1.70 83.55 .620E+05 204.2 0.86 5.06
1.81 83.66 .747E+05 254.0 0.89 4.90
1.95 83.80 .924E+05 324.9 0.92 4.74
2.08 83.93 .113E+06 411.3 0.95 4.59
2.21 84.06 .135E+06 515.5 1.00 4.37

----- hydrograph ----- <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0104) 214.34 8.09 3.00 41.12 0.81 0.34
OUTFLOW: ID= 1 (0504) 214.34 5.72 3.17 41.12 0.75 0.33

| CALIB
| STANDHYD (5042)| Area (ha)= 7.70
|ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.77 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90

| ADD HYD (0106)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0504): 214.34 5.717 3.17 41.12
+ ID2= 2 (5042): 7.70 1.988 3.00 61.64
===== ID = 3 (0106): 222.04 6.771 3.00 41.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (5212)| Area (ha)= 15.70

|ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.78 3.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 117.36
over (min) 5.00 15.00
Storage Coeff. (min)= 4.69 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
PEAK FLOW (cms)= 3.51 0.76
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 43.60
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.53

TOTALS

4.156 (iii)
3.00
64.72
81.60
0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0114)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 222.04 6.771 3.00 41.83
+ ID2= 2 (5212): 15.70 4.156 3.00 64.72
ID = 3 (0114): 237.74 10.927 3.00 43.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (553.6) -----
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100
69.13 79.02 0.1100
92.42 79.04 0.1100
98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 / 0.0700 Main Channel
336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 / 0.0900 Main Channel
394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70

0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74
1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.74 10.93 3.00 43.34 0.78 0.55
OUTFLOW: ID= 1 (0505) 237.74 9.71 3.08 43.34 0.73 0.52

CALIB
STANDHYD (5052)
ID= 1 DT= 5.0 min
Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90

ADD HYD (0108)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0505): 237.74 9.714 3.08 43.34
+ ID2= 2 (5052): 15.90 4.002 3.00 61.32
ID = 3 (0108): 253.64 13.395 3.00 44.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 / 0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 / 0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ---->

<-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.64	13.39	3.00	44.47	1.70
					1.00

OUTFLOW: ID= 1 (0506) 253.64 11.77 3.08 44.47 1.65 1.09

CALIB	
STANDHYD (5062)	Area (ha)= 11.70
ID= 1 DT= 5.0 min	Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.78	2.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	279.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	106.57
over (min)	5.00	15.00
Storage Coeff. (min)=	4.30 (ii)	12.77 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.23	0.08
		TOTALS
PEAK FLOW (cms)=	2.60	0.51
TIME TO PEAK (hrs)=	3.00	3.08
		3.026 (iii)
		3.00

RUNOFF VOLUME (mm)=	75.60	38.39	62.58
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.47	0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)					
1 + 2 = 3					
ID1= 1 (0506):	253.64	11.772	3.08	44.47	
+ ID2= 2 (5062):	11.70	3.026	3.00	62.58	
ID = 3 (0110):	265.34	13.760	3.00	45.27	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (5102)	Area (ha)= 1.70
ID= 1 DT= 5.0 min	Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.09	0.61
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	106.46	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26

0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	87.16
over (min)	5.00	15.00
Storage Coeff. (min)=	2.41 (ii)	11.59 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.30	0.09
		TOTALS
PEAK FLOW (cms)=	0.31	0.09
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	75.60	32.90
TOTAL RAINFALL (mm)=	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.40
		0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.12	79.13	.361E+03	0.6	0.24	9.91	
0.23	79.25	.776E+03	2.1	0.40	6.09	
0.35	79.37	.121E+04	4.3	0.52	4.65	
0.47	79.48	.165E+04	7.1	0.63	3.85	
0.59	79.60	.211E+04	10.5	0.72	3.34	
0.70	79.72	.258E+04	14.4	0.81	2.98	
0.82	79.84	.307E+04	18.8	0.89	2.71	
0.94	79.95	.357E+04	23.8	0.97	2.50	
1.05	80.07	.408E+04	29.2	1.04	2.33	
1.17	80.19	.461E+04	35.1	1.10	2.19	
1.29	80.30	.515E+04	41.5	1.17	2.07	
1.41	80.42	.571E+04	48.4	1.23	1.97	
1.52	80.54	.631E+04	55.8	1.28	1.88	
1.64	80.66	.695E+04	63.8	1.33	1.81	
1.76	80.77	.762E+04	72.3	1.38	1.76	
1.87	80.89	.833E+04	81.4	1.42	1.71	
2.00	81.02	.931E+04	92.4	1.44	1.68	
2.13	81.14	.109E+05	104.8	1.39	1.74	
2.25	81.27	.140E+05	120.9	1.25	1.93	
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5102)	1.70	0.39	3.00	55.10	0.07	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.28	3.00	55.08	0.05	0.24

CALIB					
STANDHYD (5112)		Area (ha)= 3.00			
ID= 1 DT= 5.0 min		Total Imp(%)= 69.00		Dir. Conn.(%)= 58.00	

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	2.07	0.93		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	141.42	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)		IN= 2--> OUT= 1		Routing time step (min)'= 5.00	
<----- DATA FOR SECTION (484.2) ----->					
Distance	Elevation	Manning			
0.00	80.80	0.0900			
9.73	80.46	0.0900			
14.10	82.04	0.0900			
17.18	82.28	0.0900			
41.13	82.12	0.0900 / 0.0700	Main Channel		
46.88	79.71	0.0700	Main Channel		
51.41	80.90	0.0700 / 0.0900	Main Channel		
94.29	80.56	0.0900			
175.64	80.72	0.0900			
192.09	80.85	0.0900			

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.13	79.84	.255E+02	0.0	0.14	54.71	
0.26	79.98	.102E+03	0.0	0.23	34.47	
0.40	80.11	.229E+03	0.1	0.30	26.30	
0.53	80.24	.408E+03	0.3	0.36	21.71	
0.66	80.37	.637E+03	0.6	0.42	18.71	
0.79	80.51	.934E+03	0.9	0.46	16.84	
0.93	80.64	.245E+04	1.6	0.31	24.96	
1.06	80.77	.873E+04	4.6	0.25	31.51	
1.19	80.90	.179E+05	11.4	0.30	26.08	
1.32	81.04	.278E+05	22.6	0.38	20.45	
1.46	81.17	.381E+05	37.5	0.46	16.91	
1.60	81.31	.484E+05	55.4	0.54	14.57	
1.74	81.45	.588E+05	76.0	0.61	12.90	
1.87	81.59	.693E+05	99.3	0.67	11.63	
2.01	81.72	.798E+05	125.0	0.73	10.64	
2.15	81.86	.903E+05	153.1	0.80	9.83	
2.29	82.00	.101E+06	183.5	0.85	9.16	
2.42	82.14	.112E+06	214.3	0.90	8.68	
2.56	82.27	.123E+06	244.4	0.93	8.40	
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0117)	4.70	1.02	3.00	58.00	0.81	0.43
OUTFLOW: ID= 1 (0512)	4.70	0.63	3.08	57.94	0.69	0.43

0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	101.25
over (min)	5.00	15.00
Storage Coeff. (min)=	2.86 (ii)	11.50 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.28	0.09

TOTALS			
PEAK FLOW (cms)=	0.61	0.16	0.744 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	75.60	37.63	59.65
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.46	0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)					
1 + 2 = 3					

AREA		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0511):	1.70	0.279	3.00	55.08	
+ ID2= 2 (5112):	3.00	0.744	3.00	59.65	
=====					
ID = 3 (0117):	4.70	1.023	3.00	58.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	2.65	1.25
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	161.25	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=	127.30	99.95					
over (min)	5.00	15.00					
Storage Coeff. (min)=	3.09 (ii)	11.78 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.27	0.09					
TOTALS							
PEAK FLOW (cms)=	0.78	0.21	0.952 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08	3.00				
RUNOFF VOLUME (mm)=	75.60	37.44	59.19				
TOTAL RAINFALL (mm)=	81.60	81.60	81.60				
RUNOFF COEFFICIENT =	0.93	0.46	0.73				

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.634	3.08	57.94
+ ID2= 2 (5122):	3.90	0.952	3.00	59.19
=====				
ID = 3 (0119):	8.60	1.541	3.00	58.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.34	13.760	3.00	45.27
+ ID2= 2 (0119):	8.60	1.541	3.00	58.50
=====				
ID = 3 (0120):	273.94	15.301	3.00	45.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6011)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	44.10	Curve Number (CN)= 62.0
	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.83		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90

0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)=		127.30	52.38				
over (min)		5.00	20.00				
Storage Coeff. (min)=		4.22 (ii)	15.47 (ii)				
Unit Hyd. Tpeak (min)=		5.00	20.00				
Unit Hyd. peak (cms)=		0.24	0.07				
TOTALS							
PEAK FLOW (cms)=		0.60	0.69	1.070 (iii)			
TIME TO PEAK (hrs)=		3.00	3.17	3.00			
RUNOFF VOLUME (mm)=		75.60	26.83	34.64			
TOTAL RAINFALL (mm)=		81.60	81.60	81.60			
RUNOFF COEFFICIENT =		0.93	0.33	0.42			

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	1.276	3.83	23.63
+ ID2= 2 (6012):	11.00	1.070	3.00	34.64
=====				
ID = 3 (0124):	55.10	1.597	3.50	25.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)				
	Area	(ha)=	43.60	Curve Number (CN)= 62.0

0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.276 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6012)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	11.00	
	Total Imp(%)=	28.00	Dir. Conn.(%)=	16.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	3.08	7.92				
Dep. Storage	(mm)=	6.00	8.00				
Average Slope	(%)=	1.00	1.00				
Length	(m)=	270.80	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26

ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.95			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.141 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6022)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	12.90	
	Total Imp(%)=	35.00	Dir. Conn.(%)=	23.00

IMPERVIOUS				PERVIOUS (i)			
Surface Area	(ha)=	4.51	8.38				
Dep. Storage	(mm)=	6.00	8.00				
Average Slope	(%)=	1.00	1.00				
Length	(m)=	293.26	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 53.84
over (min) 5.00 20.00
Storage Coeff. (min)= 4.42 (ii) 15.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.07

PEAK FLOW (cms)= 1.01 0.74 1.520 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 27.16 38.30
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.33 0.47

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0125)|

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	43.60	1.141	4.00	23.63
+ ID2= 2 (0022):	12.90	1.520	3.00	38.30
ID = 3 (0125):	56.50	1.733	3.00	26.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0124):	55.10	1.597	3.50	25.82
+ ID2= 2 (0125):	56.50	1.733	3.00	26.98
ID = 3 (0126):	111.60	3.093	3.00	26.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0603)|
| IN= 2----> OUT= 1 |
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->			
Distance	Elevation	Manning	
0.00	92.58	0.1400	
8.54	92.59	0.1400	
22.11	92.47	0.1400	
48.74	91.83	0.1400	
67.59	91.58	0.1400	
86.45	91.21	0.1400	
103.50	90.80	0.1400	
118.09	90.23	0.1400	
127.84	90.09	0.1400 / 0.0700	Main Channel
129.84	89.59	0.0700	Main Channel
130.34	90.09	0.0700 / 0.1400	Main Channel
140.57	90.14	0.1400	
161.87	90.11	0.1400	
177.03	90.04	0.1400	
188.67	89.87	0.1400	
199.59	90.31	0.1400	
212.02	90.96	0.1400	
225.58	91.35	0.1400	
252.71	91.66	0.1400	
274.11	91.86	0.1400	

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME

(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0126)	111.60	3.09	3.00	26.41	0.65
OUTFLOW: ID= 1 (0603)	111.60	2.16	4.58	26.40	0.59

| CALIB
| NASHYD (0613)| Area (ha)= 1.77 Curve Number (CN)= 66.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.22

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26

0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.146 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 26.463
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.324

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (6222)| Area (ha)= 2.02
| ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 1.58	0.44	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 116.05	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26

0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 59.51
over (min) 5.00 10.00
Storage Coeff. (min)= 2.54 (ii) 7.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.14

TOTALS

PEAK FLOW (cms)=	0.55	0.05	0.608 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	29.57	65.47
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.36	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0614) ID= 1 DT= 5.0 min	Area (ha)= 1.50 Total Imp(%)= 69.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.04	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	100.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 59.51
over (min) 5.00 10.00
Storage Coeff. (min)= 2.58 (ii) 7.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.13

TOTALS

PEAK FLOW (cms)=	0.59	0.06	0.644 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	29.57	65.47
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.36	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0618) ID= 1 DT= 5.0 min	Area (ha)= 1.49 Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 110.59
over (min) 5.00 15.00
Storage Coeff. (min)= 2.32 (ii) 10.67 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS

PEAK FLOW (cms)=	0.26	0.09	0.339 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	75.60	34.77	55.18
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.43	0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0615) ID= 1 DT= 5.0 min	Area (ha)= 2.14 Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.67	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	119.44	40.00
Mannings n =	0.013	0.250

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.33
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	99.67	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 187.52
over (min) 5.00 10.00
Storage Coeff. (min)= 2.31 (ii) 9.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

TOTALS

PEAK FLOW (cms)=	0.26	0.12	0.384 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	75.60	42.46	59.02
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.52	0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (6302)		Area (ha)= 0.86			
ID= 1 DT= 5.0 min		Total Imp(%)= 94.00		Dir. Conn.(%)= 94.00	
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.81		0.05	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	75.72		40.00	
Mannings n	=	0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)= 127.30 48.76							
over (min) 5.00 10.00							
Storage Coeff. (min)= 2.64 (ii) 9.08 (ii)							
Unit Hyd. Tpeak (min)= 5.00 10.00							
Unit Hyd. peak (cms)= 0.31 0.23							
TOTALS							
PEAK FLOW (cms)= 0.29 0.01 0.292 (iii)							
TIME TO PEAK (hrs)= 3.00 3.00 3.00							
RUNOFF VOLUME (mm)= 75.60 48.17 61.88							
TOTAL RAINFALL (mm)= 81.60 81.60 81.60							
RUNOFF COEFFICIENT = 0.93 0.59 0.76							

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0614):	1.50	0.339	3.00	55.18
+ ID2= 2 (0615):	2.14	0.644	3.00	65.47
=====				
ID = 3 (0290):	3.64	0.983	3.00	61.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
3 + 2 = 1				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0290):	3.64	0.983	3.00	61.23
+ ID2= 2 (0617):	2.31	0.621	3.00	61.88
=====				
ID = 1 (0290):	5.95	1.605	3.00	61.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0290):	5.95	1.605	3.00	61.48

TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0617)			
ID= 1 DT= 5.0 min			
Area (ha)=	2.31		
Total Imp(%)=	78.00		
Dir. Conn.(%)=	50.00		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max.Eff.Inten.(mm/hr)= 127.30 211.23							

+ ID2= 2 (0618): 1.49 0.384 3.00 59.02
=====

ID = 3 (0290): 7.44 1.989 3.00 60.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
3 + 2 = 1				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0290):	7.44	1.989	3.00	60.99
+ ID2= 2 (6222):	2.02	0.608	3.00	65.47
=====				
ID = 1 (0290):	9.46	2.597	3.00	61.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
AREA	QPEAK	TPEAK	R.V.	
(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0290):	9.46	2.597	3.00	61.95
+ ID2= 2 (6302):	0.86	0.292	3.00	72.52
=====				
ID = 3 (0290):	10.32	2.889	3.00	62.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (6212)			
ID= 1 DT= 5.0 min			
Area (ha)=	1.15		
Total Imp(%)=	65.00		
Dir. Conn.(%)=	65.00		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90

0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 40.75
over (min) 5.00 15.00
Storage Coeff. (min)= 2.14 (ii) 14.59 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.26 0.03
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 75.60 24.35
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30

TOTALS

0.287 (iii)
3.00
57.65
81.60
0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6232)	Area (ha)= 0.85
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00
	IMPERVIOUS PERVIOUS (i)
Surface Area (ha)=	0.55 0.30
Dep. Storage (mm)=	6.00 8.00
Average Slope (%)=	1.00 1.00
Length (m)=	75.28 40.00
Mannings n =	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

		----	TRANSFORMED	HYETOGRAPH	----		
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 40.75
over (min) 5.00 15.00
Storage Coeff. (min)= 1.96 (ii) 14.40 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.08

PEAK FLOW (cms)= 0.20 0.02
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 75.60 24.35
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30

TOTALS

0.212 (iii)
3.00
57.65
81.60
0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)	
1 + 2 = 3	AREA QPEAK TPEAK R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6212):	1.15	0.287	3.00	57.65
+ ID2= 2 (6232):	0.85	0.212	3.00	57.65
ID = 3 (0288):	2.00	0.499	3.00	57.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (0626)	Area (ha)= 0.96
ID= 1 DT= 5.0 min	Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00
	IMPERVIOUS PERVIOUS (i)
Surface Area (ha)=	0.58 0.38
Dep. Storage (mm)=	6.00 8.00
Average Slope (%)=	1.00 1.00
Length (m)=	80.00 40.00
Mannings n =	0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

		----	TRANSFORMED	HYETOGRAPH	----		
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 77.39
over (min) 5.00 15.00
Storage Coeff. (min)= 2.03 (ii) 11.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

PEAK FLOW (cms)= 0.20 0.05
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 38.33
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.47

TOTALS

0.245 (iii)
3.00
60.68
81.60
0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)	
1 + 2 = 3	AREA QPEAK TPEAK R.V.
	(ha) (cms) (hrs) (mm)
ID1= 1 (0288):	2.00 0.499 3.00 57.65
+ ID2= 2 (0290):	10.32 2.889 3.00 62.83
ID = 3 (0297):	12.32 3.388 3.00 61.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)	
3 + 2 = 1	AREA QPEAK TPEAK R.V.
	(ha) (cms) (hrs) (mm)
ID1= 3 (0297):	12.32 3.388 3.00 61.99
+ ID2= 2 (0613):	1.77 0.146 3.00 26.46
ID = 1 (0297):	14.09 3.513 3.00 57.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)	
1 + 2 = 3	AREA QPEAK TPEAK R.V.
	(ha) (cms) (hrs) (mm)
ID1= 1 (0297):	14.09 3.513 3.00 57.53
+ ID2= 2 (0626):	0.96 0.245 3.00 60.68
ID = 3 (0297):	15.05 3.758 3.00 57.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0302) IN= 2---> OUT= 1 DT= 5.0 min					OVERFLOW IS OFF				
OUTFLOW (cms)		STORAGE (ha.m.)		OUTFLOW (cms)		STORAGE (ha.m.)			
0.0000		0.0000		0.1070		0.3146			
0.0150		0.1715		0.7100		0.8031			
		AREA (ha)		QPEAK (cms)		TPEAK (hrs)		R.V. (mm)	
INFLOW : ID= 2 (0297)		15.050		3.758		3.00		57.73	
OUTFLOW: ID= 1 (0302)		15.050		0.449		3.58		57.53	

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.94
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.5913

CALIB STANDHYD (6202) ID= 1 DT= 5.0 min					Area (ha)= 1.26 Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00				
		IMPERVIOUS		PERVIOUS (i)					
Surface Area		(ha)=		1.18		0.08			
Dep. Storage		(mm)=		6.00		8.00			
Average Slope		(%)=		1.00		1.00			
Length		(m)=		91.65		40.00			
Mannings n		=		0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		

1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=		127.30	48.76				
over (min)		5.00	5.00				
Storage Coeff. (min)=		2.20 (ii)	4.83 (ii)				
Unit Hyd. Tpeak (min)=		5.00	5.00				
Unit Hyd. peak (cms)=		0.30	0.22				
PEAK FLOW (cms)=		0.42	0.01			*TOTALS*	
TIME TO PEAK (hrs)=		3.00	3.00			0.427 (iii)	
RUNOFF VOLUME (mm)=		75.60	24.35			3.00	
TOTAL RAINFALL (mm)=		81.60	81.60			72.52	
RUNOFF COEFFICIENT =		0.93	0.30			81.60	
						0.89	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0292) IN= 2---> OUT= 1 DT= 5.0 min					OVERFLOW IS OFF				
OUTFLOW (cms)		STORAGE (ha.m.)		OUTFLOW (cms)		STORAGE (ha.m.)			
0.0000		0.0000		0.0500		0.0848			
0.0090		0.0366		0.0000		0.0000			
		AREA (ha)		QPEAK (cms)		TPEAK (hrs)		R.V. (mm)	
INFLOW : ID= 2 (6202)		1.260		0.427		3.00		72.52	
OUTFLOW: ID= 1 (0292)		1.260		0.039		3.58		71.71	

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.11
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0662

CALIB STANDHYD (0606) ID= 1 DT= 5.0 min					Area (ha)= 1.98 Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00				

		IMPERVIOUS		PERVIOUS (i)					
Surface Area		(ha)=		1.29		0.69			
Dep. Storage		(mm)=		6.00		8.00			
Average Slope		(%)=		1.00		1.00			
Length		(m)=		114.89		40.00			
Mannings n		=		0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)=		127.30	40.74				
over (min)		5.00	15.00				
Storage Coeff. (min)=		2.52 (ii)	14.96 (ii)				
Unit Hyd. Tpeak (min)=		5.00	15.00				
Unit Hyd. peak (cms)=		0.29	0.08				
						TOTALS	
PEAK FLOW (cms)=		0.45	0.05			0.492 (iii)	
TIME TO PEAK (hrs)=		3.00	3.17			3.00	
RUNOFF VOLUME (mm)=		75.60	24.34			57.66	
TOTAL RAINFALL (mm)=		81.60	81.60			81.60	
RUNOFF COEFFICIENT =		0.93	0.30			0.71	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

- THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0612) ID= 1 DT= 5.0 min					Area (ha)= 2.18 Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00				
		IMPERVIOUS		PERVIOUS (i)					
Surface Area		(ha)=		2.05		0.13			
Dep. Storage		(mm)=		6.00		8.00			
Average Slope		(%)=		1.00		1.00			
Length		(m)=		120.55		40.00			
Mannings n		=		0.013		0.250			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.30 0.89

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0295) OVERFLOW IS OFF
IN= 2----> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0612)	2.180	0.734	3.00	72.52
OUTFLOW: ID= 1 (0295)	2.180	0.067	3.58	72.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.19
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1143

ADD HYD (0306)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0292):	1.26	0.039	3.58	71.71
+ ID2= 2 (0295):	2.18	0.067	3.58	72.06
ID = 3 (0306):	3.44	0.106	3.58	71.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0306):	3.44	0.106	3.58	71.93
+ ID2= 2 (0606):	1.98	0.492	3.00	57.66

ID = 1 (0306): 5.42 0.565 3.00 66.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning
0.00	92.50	0.0700
36.57	92.00	0.0700
90.03	91.00	0.0700
124.58	90.00	0.0700 /0.0350
128.34	89.59	0.0350
129.84	89.59	0.0350
132.39	90.00	0.0350 /0.0700
163.76	91.00	0.0700
187.47	91.00	0.0700
203.83	91.00	0.0700
306.44	92.00	0.0700

TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.32
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

hydrograph -----> <-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0306)	5.42	0.56	3.00	66.72	0.23	0.71
OUTFLOW: ID= 1 (0304)	5.42	0.28	3.08	66.71	0.16	0.56

TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.47 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min

Area (ha)=	2.49
Total Imp(%)=	78.00
Dir. Conn.(%)=	50.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	1.94	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	128.84	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH ----->

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95
0.167	3.26	1.667	8.16	3.167	17.95
0.250	3.26	1.750	8.16	3.250	17.95
0.333	3.26	1.833	8.16	3.333	17.95
0.417	3.26	1.917	8.16	3.417	17.95
0.500	3.26	2.000	8.16	3.500	17.95
0.583	4.90	2.083	9.79	3.583	8.16
0.667	4.90	2.167	9.79	3.667	8.16
0.750	4.90	2.250	9.79	3.750	8.16
0.833	4.90	2.333	9.79	3.833	8.16
0.917	4.90	2.417	9.79	3.917	8.16
1.000	4.90	2.500	9.79	4.000	8.16
1.083	4.90	2.583	48.96	4.083	6.53
1.167	4.90	2.667	48.96	4.167	6.53
1.250	4.90	2.750	88.13	4.250	6.53
1.333	4.90	2.833	88.13	4.333	6.53
1.417	4.90	2.917	127.30	4.417	6.53
1.500	4.90	3.000	127.30	4.500	6.53

Max.Eff.Inten.(mm/hr)= 127.30 244.24

CALIB
STANDHYD (0616)
ID= 1 DT= 5.0 min

Area (ha)=	0.44
Total Imp(%)=	78.00
Dir. Conn.(%)=	78.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	0.34	0.10
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	54.16	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH ----->

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95
0.167	3.26	1.667	8.16	3.167	17.95
0.250	3.26	1.750	8.16	3.250	17.95
0.333	3.26	1.833	8.16	3.333	17.95
0.417	3.26	1.917	8.16	3.417	17.95
0.500	3.26	2.000	8.16	3.500	17.95
0.583	4.90	2.083	9.79	3.583	8.16
0.667	4.90	2.167	9.79	3.667	8.16
0.750	4.90	2.250	9.79	3.750	8.16
0.833	4.90	2.333	9.79	3.833	8.16
0.917	4.90	2.417	9.79	3.917	8.16
1.000	4.90	2.500	9.79	4.000	8.16
1.083	4.90	2.583	48.96	4.083	6.53
1.167	4.90	2.667	48.96	4.167	6.53
1.250	4.90	2.750	88.13	4.250	6.53
1.333	4.90	2.833	88.13	4.333	6.53
1.417	4.90	2.917	127.30	4.417	6.53
1.500	4.90	3.000	127.30	4.500	6.53

Max.Eff.Inten.(mm/hr)= 127.30 77.39

Storage Coeff. (min)= 1.61 (ii) 6.36 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00

Unit Hyd. peak (cms)= 0.32 0.15

PEAK FLOW (cms)= 0.12 0.02 0.138 (iii)

TIME TO PEAK (hrs)= 3.00 3.00 3.00

RUNOFF VOLUME (mm)= 75.60 38.33 67.39

over (min) 5.00 10.00
Storage Coeff. (min)= 2.70 (ii) 8.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.12
TOTALS
PEAK FLOW (cms)= 0.44 0.28 0.716 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 56.86 66.23
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.70 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0624)
ID= 1 DT= 5.0 min
Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26

1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 77.39
over (min) 5.00 10.00
Storage Coeff. (min)= 1.98 (ii) 6.74 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14

TOTALS
PEAK FLOW (cms)= 0.24 0.03 0.278 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 75.60 38.33 67.40
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.47 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0286)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6102): 2.49 0.716 3.00 66.23
+ ID2= 2 (0616): 0.44 0.138 3.00 67.39
ID = 3 (0286): 2.93 0.854 3.00 66.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0286)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0286): 2.93 0.854 3.00 66.40
+ ID2= 2 (0624): 0.89 0.278 3.00 67.40
ID = 1 (0286): 3.82 1.131 3.00 66.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0305)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE
(cms) (ha.m.)
(cms) (ha.m.)
0.0000 0.0000 0.1760 0.2330
0.0280 0.0927 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0286) 3.820 1.131 3.00 66.63
OUTFLOW: ID= 1 (0305) 3.820 0.117 3.58 66.42
PEAK FLOW REDUCTION [Qout/Qin](%)= 10.37
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1775

CALIB
STANDHYD (0619)
ID= 1 DT= 5.0 min
Area (ha)= 1.64
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.07 0.57
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26

1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 86.94
over (min) 5.00 15.00
Storage Coeff. (min)= 2.38 (ii) 11.57 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.38 0.09 0.447 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 43.13 64.23
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.53 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0293)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0302): 15.05 0.449 3.58 57.53
+ ID2= 2 (0304): 5.42 0.285 3.08 66.71
ID = 3 (0293): 20.47 0.665 3.50 59.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0293): 20.47 0.665 3.50 59.96
+ ID2= 2 (0305): 3.82 0.117 3.58 66.42
ID = 1 (0293): 24.29 0.781 3.50 60.98

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.17	83.95	.465E+02	0.0	0.03	432.88	
0.33	84.11	.186E+03	0.0	0.04	272.70	
0.50	84.28	.418E+03	0.0	0.05	208.11	
0.67	84.45	.743E+03	0.1	0.06	171.79	
0.83	84.61	.116E+04	0.1	0.08	148.04	
1.00	84.78	.167E+04	0.2	0.09	131.10	
1.20	84.98	.252E+04	0.4	0.10	110.62	
1.41	85.19	.469E+04	0.6	0.09	121.59	
1.61	85.39	.842E+04	1.1	0.09	126.63	
1.81	85.59	.133E+05	1.8	0.09	121.99	
2.01	85.79	.192E+05	2.7	0.10	116.68	
2.22	86.00	.298E+05	4.0	0.09	125.45	
2.42	86.20	.487E+05	5.6	0.08	143.80	
2.62	86.40	.736E+05	9.0	0.08	137.02	
2.82	86.60	.102E+06	13.1	0.09	130.82	
3.03	86.81	.136E+06	18.1	0.09	125.42	
3.23	87.01	.178E+06	24.4	0.09	121.07	
3.43	87.21	.224E+06	34.2	0.10	108.80	
3.63	87.41	.271E+06	44.8	0.11	100.89	
			<--- hydrograph --->		<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(m/s)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.16	6.64	3.00	36.16	2.48	0.08
OUTFLOW: ID= 1 (0604)	167.16	2.67	4.33	36.15	2.03	0.10

RUNOFF VOLUME (mm)= 75.60 46.55 66.59
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.57 0.82

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0604):	167.16	2.666	4.33	36.15
+ ID2= 2 (6042):	24.00	6.596	3.00	66.59
=====				
ID = 3 (0130):	191.16	8.600	3.00	39.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)			
IN= 2----> OUT= 1	Routing time step (min)'= 5.00		
----->			
<----- DATA FOR SECTION (801.4) ----->			
Distance	Elevation	Manning	
0.00	82.95	0.1100	
3.78	82.95	0.1100	
9.24	82.49	0.1100	
50.67	82.10	0.1100	
105.12	82.17	0.1100	
119.34	81.56	0.1100	
150.67	81.66	0.1100	
157.23	82.37	0.1100	
190.03	82.57	0.1100	
223.75	82.27	0.1100	
252.32	82.50	0.1100	
254.65	81.95	0.1100 /0.0700	Main Channel
258.15	80.95	0.0700	Main Channel
259.65	81.95	0.0700 /0.1100	Main Channel
263.15	82.90	0.1100	
278.14	82.80	0.1100	
282.35	81.68	0.1100	
285.02	82.19	0.1100	
336.56	82.53	0.1100	
404.40	82.68	0.1100	

TRAVEL TIME TABLE					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ---->					
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0130)	191.16	8.60	3.00	39.97	1.19
OUTFLOW: ID= 1 (0605)	191.16	3.88	3.25	39.97	0.94

CALIB	Area (ha)= 11.40	Dir. Conn.(%)= 62.00
STANDHYD (6112)	Total Imp(%)= 72.00	
ID= 1 DT= 5.0 min		

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 8.21	3.19	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 275.68	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90	
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90	
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90	
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90	
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90	
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90	
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26	
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26	
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26	
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26	
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26	
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26	
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26	
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26	
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26	
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26	
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26	
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26	

Max.Eff.Inten.(mm/hr)=	127.30	111.68
over (min)	5.00	15.00
Storage Coeff. (min)=	4.26 (ii)	12.58 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.23	0.08

PEAK FLOW (cms)=	2.42	0.59	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	2.916 (iii)
RUNOFF VOLUME (mm)=	75.60	41.50	62.64
TOTAL RAINFALL (mm)=	81.60	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.51	0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0605):	191.16	3.875	3.25	39.97
+ ID2= 2 (6112):	11.40	2.916	3.00	62.64
=====				
ID = 3 (0139):	202.56	5.842	3.00	41.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 15.90	Dir. Conn.(%)= 65.00
STANDHYD (6052)	Total Imp(%)= 74.00	
ID= 1 DT= 5.0 min		

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 11.77	4.13	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 325.58	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	88.54
over (min)	5.00	15.00
Storage Coeff. (min)=	4.71 (ii)	13.83 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.22	0.08

PEAK FLOW (cms)=	3.50	0.57	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	3.971 (iii)
RUNOFF VOLUME (mm)=	75.60	33.11	60.73
TOTAL RAINFALL (mm)=	81.60	81.60	81.60

RUNOFF COEFFICIENT = 0.93 0.41 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0139):	202.56	5.842	3.00	41.25
+ ID2= 2 (6052):	15.90	3.971	3.00	60.73
=====				
ID = 3 (0132):	218.46	9.814	3.00	42.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)	
IN= 2--> OUT= 1	

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (350.0) ----->

Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 / 0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 / 0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ----> <-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0132)	218.46	9.81	3.00	42.66	0.82	0.75
OUTFLOW: ID= 1 (0530)	218.46	7.68	3.08	42.66	0.73	0.72

CALIB STANDHYD (5302)		Area (ha)= 5.80
ID= 1 DT= 5.0 min		Total Imp(%)= 66.00 Dir. Conn.(%)= 56.00

	IMPERVIOUS (i)	PERVIOUS (i)
Surface Area (ha)=	3.83	1.97
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=	127.30	82.95
over (min)	5.00	15.00
Storage Coeff. (min)=	3.48 (ii)	12.84 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.26	0.08
TOTALS		
PEAK FLOW (cms)=	1.13	0.26
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	75.60	32.22
TOTAL RAINFALL (mm)=	81.60	81.60
RUNOFF COEFFICIENT =	0.93	0.39

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0530):	218.46	7.681	3.08	42.66
+ ID2= 2 (5302):	5.80	1.344	3.00	56.51
=====				
ID = 3 (0134):	224.26	8.500	3.00	43.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	273.94	15.301	3.00	45.68
+ ID2= 2 (0134):	224.26	8.500	3.00	43.02
=====				
ID = 3 (0135):	498.20	23.801	3.00	44.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	
IN= 2--> OUT= 1	

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37

0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26
Max. Eff. Inten. (mm/hr)=		127.30		99.72			
over (min)		5.00		20.00			
Storage Coeff. (min)=		6.60	(ii)	15.30	(ii)		
Unit Hyd. Tpeak (min)=		5.00		20.00			
Unit Hyd. peak (cms)=		0.18		0.07			
TOTALS							
PEAK FLOW	(cms)=	5.69		3.51		8.194	(iii)
TIME TO PEAK	(hrs)=	3.00		3.17		3.00	
RUNOFF VOLUME	(mm)=	75.60		39.14		52.26	
TOTAL RAINFALL	(mm)=	81.60		81.60		81.60	
RUNOFF COEFFICIENT	=	0.93		0.48		0.64	

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122) 1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0507):	498.20	18.682	3.17	44.48
+ ID2= 2 (5072):	48.90	8.194	3.00	52.26
=====				
ID = 3 (0122):	547.10	24.124	3.17	45.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)= 9.40			
STANDHYD (5402)		Total Imp(%)= 50.00		Dir. Conn.(%)= 35.00	
ID= 1 DT= 5.0 min					
		IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=		4.70		4.70	
Dep. Storage (mm)=		6.00		8.00	

STORE HYD(1505)	AREA	(ha)= 30.00
ID= 1 DT= 5.0min	QPEAK	(cms)= 0.78
-----	TPEAK	(hrs)= 15.58
	VOLUME	(mm)= 402.14

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.									

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.44	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11

24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11

28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12

25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11

29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

V V I SSSS U U A L (v 6.2.2018)
V V I SS U U A A L
V V I SS U U A A A A A L
V V I SS U U A A L
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 0.550 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 6.078
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.152

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 37.32
Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38

0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 13.05
over (min) 10.00 30.00
Storage Coeff. (min)= 8.12 (ii) 27.74 (ii)
Unit Hyd. Tpeak (min)= 10.00 30.00
Unit Hyd. peak (cms)= 0.13 0.04

TOTALS
PEAK FLOW (cms)= 1.25 0.41 1.404 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 7.74 14.05
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.19 0.35

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (5011):	80.20	0.550	3.92	6.08
+ ID2= 2 (5012):	37.32	1.404	3.00	14.05
ID = 3 (0100):	117.52	1.503	3.08	8.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2---> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning
0.00	89.30	0.1100
4.20	89.28	0.1100
9.03	88.80	0.1100
21.55	88.78	0.1100
29.06	88.24	0.1100
39.87	87.83	0.1100
55.54	87.84	0.1100 / 0.0700 Main Channel
57.54	86.84	0.0700 Main Channel
59.04	86.84	0.0700 Main Channel
61.04	87.84	0.0700 / 0.1100 Main Channel
74.10	87.86	0.1100
87.72	88.07	0.1100
101.34	88.18	0.1100
113.53	88.23	0.1100
128.57	88.32	0.1100
142.19	88.61	0.1100
155.81	88.53	0.1100
183.05	88.85	0.1100
187.19	88.84	0.1100
211.21	88.88	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.00
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.489E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

<---- hydrograph ----> <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)

INFLOW : ID= 2 (0100) 117.52 1.50 3.08 8.61 0.70 0.74
OUTFLOW: ID= 1 (0502) 117.52 0.97 3.67 8.61 0.56 0.65

CALIB
NASHYD (5691)
ID= 1 DT= 5.0 min
Area (ha)= 2.30 Curve Number (CN)= 69.3
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.07

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.085 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 6.525
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.163

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

| NASHYD (5021)| Area (ha)= 3.67 Curve Number (CN)= 68.8
|ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.43

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.047 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 6.981
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.174

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (5092)| Area (ha)= 1.73
|ID= 1 DT= 5.0 min | Total Imp(%)= 50.60 Dir. Conn.(%)= 50.60

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.88 0.85
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 107.39 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.38
over (min) 5.00 25.00
Storage Coeff. (min)= 3.23 (ii) 21.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05

PEAK FLOW (cms)= 0.15 0.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.33 0.158 (iii)
RUNOFF VOLUME (mm)= 34.03 11.56 22.92
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

| STANDHYD (5082)| Area (ha)= 0.71
|ID= 1 DT= 5.0 min | Total Imp(%)= 73.00 Dir. Conn.(%)= 64.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.52 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 68.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.47
over (min) 5.00 25.00
Storage Coeff. (min)= 2.47 (ii) 21.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

PEAK FLOW (cms)= 0.08 0.00 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.33 0.080 (iii)
RUNOFF VOLUME (mm)= 34.03 7.86 24.59
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.20 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB |
| STANDHYD (5682)| Area (ha)= 0.53
|ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 59.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	' TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	' hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 6.03
over (min) 5.00 30.00
Storage Coeff. (min)= 2.26 (ii) 28.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.30 0.04

PEAK FLOW (cms)= 0.06 0.00 *TOTALS*
0.060 (iii)

TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 5.97 24.18
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.15 0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0501)
ID= 1 DT= 5.0 min

Area (ha)= 6.23
Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.62 3.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.38
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.52 (ii) 20.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.10 0.00 0.103 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.56 29.07
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5752)
ID= 1 DT= 5.0 min

Area (ha)= 0.78
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38

Max.Eff.Inten.(mm/hr)= 61.93 4.82
over (min)= 5.00 35.00
Storage Coeff. (min)= 4.74 (ii) 33.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.22 0.03

TOTALS
PEAK FLOW (cms)= 0.43 0.03 0.438 (iii)
TIME TO PEAK (hrs)= 3.00 3.50 3.00
RUNOFF VOLUME (mm)= 34.03 4.82 17.08
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.12 0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0510)
ID= 1 DT= 5.0 min

Area (ha)= 0.76
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.59 0.17
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 71.18 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.38
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.52 (ii) 20.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.10 0.00 0.103 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.56 29.07
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

Max.Eff.Inten.(mm/hr)= 61.93 12.91
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.54 (ii) 22.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.09 0.01 0.089 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.34 25.37
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.23 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min

Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Max.Eff.Inten.(mm/hr)= 61.93 16.64
over (min) 5.00 25.00
Storage Coeff. (min)= 3.41 (ii) 21.22 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.26 0.05

TOTALS

PEAK FLOW (cms)= 0.23 0.02 0.237 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 11.72 26.22
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.29 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.

+ ID2= 2 (5282):	2.08	0.237	3.00	26.22
=====				
ID = 3 (0481):	15.18	1.037	3.00	17.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	15.18	1.037	3.00	17.51
+ ID2= 2 (5682):	0.53	0.060	3.00	24.18
=====				
ID = 1 (0481):	15.71	1.097	3.00	17.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	1.097	3.00	17.74
+ ID2= 2 (5691):	2.30	0.085	3.00	6.53
=====				
ID = 3 (0481):	18.01	1.181	3.00	16.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	1.181	3.00	16.30
+ ID2= 2 (5752):	0.78	0.089	3.00	25.37
=====				
ID = 1 (0481):	18.79	1.270	3.00	16.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)	Area	(ha)=	7.22	Curve Number (CN)= 80.7
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.20	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	6.23	0.438	3.00	17.08
+ ID2= 2 (5021):	3.67	0.047	3.42	6.98
=====				
ID = 3 (0481):	9.90	0.458	3.00	13.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	9.90	0.458	3.00	13.34
+ ID2= 2 (5082):	0.71	0.080	3.00	24.59
=====				
ID = 1 (0481):	10.61	0.538	3.00	14.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	10.61	0.538	3.00	14.09
+ ID2= 2 (5092):	1.73	0.158	3.00	22.92
=====				
ID = 3 (0481):	12.34	0.697	3.00	15.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	12.34	0.697	3.00	15.33
+ ID2= 2 (0510):	0.76	0.103	3.00	29.07
=====				
ID = 1 (0481):	13.10	0.800	3.00	16.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	13.10	0.800	3.00	16.13

+ ID2= 2 (5282):	2.08	0.237	3.00	26.22
=====				
ID = 3 (0481):	15.18	1.037	3.00	17.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	15.18	1.037	3.00	17.51
+ ID2= 2 (5682):	0.53	0.060	3.00	24.18
=====				
ID = 1 (0481):	15.71	1.097	3.00	17.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	1.097	3.00	17.74
+ ID2= 2 (5691):	2.30	0.085	3.00	6.53
=====				
ID = 3 (0481):	18.01	1.181	3.00	16.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	1.181	3.00	16.30
+ ID2= 2 (5752):	0.78	0.089	3.00	25.37
=====				
ID = 1 (0481):	18.79	1.270	3.00	16.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (0524)	Area	(ha)=	7.22	Curve Number (CN)= 80.7
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.20	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 0.261 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 11.019
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.275

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
NASHYD (0522)	Area	(ha)=	3.31	Curve Number (CN)= 63.1
ID= 1 DT= 5.0 min	Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=		0.16	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		

0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.066 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 5.649
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.141

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0580)
ID= 1 DT= 5.0 min
Area (ha)= 1.87
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 0.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 111.65 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38

0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 6.03
over (min)= 5.00 35.00
Storage Coeff. (min)= 3.31 (ii) 30.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.26 0.04

PEAK FLOW (cms)= 0.21 0.01
TIME TO PEAK (hrs)= 3.00 3.50
RUNOFF VOLUME (mm)= 34.03 5.97
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.15

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0519)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 5.71
over (min)= 5.00 35.00
Storage Coeff. (min)= 3.41 (ii) 30.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.26 0.04

PEAK FLOW (cms)= 0.23 0.01
TIME TO PEAK (hrs)= 3.00 3.50
RUNOFF VOLUME (mm)= 34.03 5.67
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.14

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529)
ID= 1 DT= 5.0 min
Area (ha)= 1.80
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 5.71
over (min)= 5.00 35.00
Storage Coeff. (min)= 3.27 (ii) 30.57 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.27 0.04

PEAK FLOW (cms)= 0.24 0.00
TIME TO PEAK (hrs)= 3.00 3.50
RUNOFF VOLUME (mm)= 34.03 5.67
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.14

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0519):	2.08	0.230	3.00	24.10
+ ID2= 2 (0529):	1.80	0.239	3.00	27.78
=====				
ID = 3 (0267):	3.88	0.469	3.00	25.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0267):	3.88	0.469	3.00	25.81
+ ID2= 2 (0580):	1.87	0.208	3.00	24.20
=====				
ID = 1 (0267):	5.75	0.677	3.00	25.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0267):	5.75	0.677	3.00	25.28
+ ID2= 2 (0522):	3.31	0.066	3.08	5.65
=====				
ID = 3 (0265):	9.06	0.740	3.00	18.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0523)	Area (ha)=	6.61		
ID= 1 DT= 5.0 min	Total Imp(%)=	75.00	Dir. Conn.(%)=	50.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	4.96	1.65		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	209.92	40.00		
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Max.Eff.Inten.(mm/hr)=	61.93	38.71	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.83 (ii)	17.53 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.22	0.06	
			TOTALS
PEAK FLOW (cms)=	0.54	0.10	0.609 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	34.03	11.75	22.89
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.29	0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0265):	9.06	0.740	3.00	18.11

+ ID2= 2 (0523):	6.61	0.609	3.00	22.89
=====				
ID = 3 (0260):	15.67	1.349	3.00	20.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0525)	Area (ha)=	1.45		
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	0.94	0.51		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	98.32	40.00		
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	9.18	25.32
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.23	0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0272)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0260):	15.67	1.349	3.00	20.13
+ ID2= 2 (0525):	1.45	0.164	3.00	25.32
=====				
ID = 3 (0272):	17.12	1.514	3.00	20.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0264)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0272):	17.12	1.514	3.00	20.57
+ ID2= 2 (0524):	7.22	0.261	3.08	11.02
=====				
ID = 3 (0264):	24.34	1.738	3.00	17.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0527)	Area (ha)=	1.68		
ID= 1 DT= 5.0 min	Total Imp(%)=	76.00	Dir. Conn.(%)=	52.00
=====				
	IMPERVIOUS	PERVIOUS (i)		
Surface Area (ha)=	1.28	0.40		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	105.83	40.00		
Mannings n	=	0.013	0.250	

Max.Eff.Inten.(mm/hr)=	61.93	12.66	
over (min)	5.00	25.00	
Storage Coeff. (min)=	3.06 (ii)	22.92 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.27	0.05	
			TOTALS
PEAK FLOW (cms)=	0.16	0.01	0.164 (iii)

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Max.Eff.Inten.(mm/hr)= 61.93 74.64
over (min) 5.00 15.00
Storage Coeff. (min)= 3.20 (ii) 12.97 (iii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

TOTALS
PEAK FLOW (cms)= 0.15 0.05 0.188 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 18.71 26.67
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.47 0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0270)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.

TOTALS
PEAK FLOW (cms)= 0.23 0.02 0.242 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.01 24.66
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0273)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0270):	26.02	1.927	3.00 18.31
+ ID2= 2 (5202):	2.27	0.242	3.00 24.66
ID = 3 (0273):	28.29	2.169	3.00 18.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0274)
IN= 2----> OUT= 1
DT= 5.0 min

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.1400	0.8343
0.0195	0.2416	0.2360	1.0014
0.0700	0.5564	0.3420	1.6616

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0273)	28.290	2.169	3.00 18.82
OUTFLOW: ID= 1 (0274)	28.290	0.057	6.08 18.68

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.62
TIME SHIFT OF PEAK FLOW (min)=185.00
MAXIMUM STORAGE USED (ha.m.)= 0.4739

CALIB
STANDHYD (0526)

Area	(ha)=

(ha) (cms) (hrs) (mm)
ID1= 1 (0264): 24.34 1.738 3.00 17.73
+ ID2= 2 (0527): 1.68 0.188 3.00 26.67
ID = 3 (0270): 26.02 1.927 3.00 18.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min

Area	(ha)=	2.27
Total Imp(%)=	61.00	Dir. Conn.(%)= 61.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.38	0.89
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	123.02	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Max.Eff.Inten.(mm/hr)= 61.93 13.94
over (min) 5.00 25.00
Storage Coeff. (min)= 3.50 (ii) 22.62 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.26 0.05

ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.73	0.21
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	79.16	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Max.Eff.Inten.(mm/hr)= 61.93 14.01
over (min) 5.00 25.00
Storage Coeff. (min)= 2.69 (ii) 21.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05

TOTALS
PEAK FLOW (cms)= 0.13 0.00 0.127 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.06 28.74
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279)		OVERFLOW IS OFF			
IN= 2----> OUT= 1					
DT= 5.0 min					

		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	0.0476	0.0432
		0.0096	0.0220	0.0579	0.0480
		0.0206	0.0306	0.0671	0.0528
		0.0297	0.0360	0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0526)		0.940	0.127	3.00	28.74
OUTFLOW: ID= 1 (0279)		0.940	0.008	4.08	28.13
PEAK FLOW REDUCTION [Qout/Qin](%)= 6.64					
TIME SHIFT OF PEAK FLOW (min)= 65.00					
MAXIMUM STORAGE USED (ha.m.)= 0.0193					

CALIB				
STANDHYD (0574)				
ID= 1 DT= 5.0 min				
		Area (ha)=	1.44	
		Total Imp(%)=	78.00	Dir. Conn.(%)= 78.00
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	1.12	0.32	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	97.98	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59

MAXIMUM STORAGE USED (ha.m.)= 0.0288

ADD HYD (0275) 1 + 2 = 3									
		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)				
ID1= 1 (0276):		1.44	0.013	4.08	27.85				
+ ID2= 2 (0279):		0.94	0.008	4.08	28.13				
ID = 3 (0275):		2.38	0.022	4.08	27.96				

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0571)				
ID= 1 DT= 5.0 min				
		Area (ha)=	19.59	
		Total Imp(%)=	68.00	Dir. Conn.(%)= 50.00
		IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=		13.32	6.27	
Dep. Storage (mm)=		6.00	8.00	
Average Slope (%)=		1.00	1.00	
Length (m)=		361.39	40.00	
Mannings n =		0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59

0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	8.93	
over (min)	5.00	30.00	
Storage Coeff. (min)=	3.06 (ii)	25.89 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.27	0.04	
PEAK FLOW (cms)=	0.19	0.00	0.192 (iii)
TIME TO PEAK (hrs)=	3.00	3.42	3.00
RUNOFF VOLUME (mm)=	34.03	7.71	28.23
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.19	0.71

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276)		OVERFLOW IS OFF			
IN= 2---> OUT= 1					
DT= 5.0 min					
		OUTFLOW	STORAGE	OUTFLOW	STORAGE
		(cms)	(ha.m.)	(cms)	(ha.m.)
		0.0000	0.0000	0.0730	0.0642
		0.0150	0.0327	0.0890	0.0712
		0.0310	0.0455	0.1030	0.0784
		0.0450	0.0536	0.0000	0.0000
		AREA	QPEAK	TPEAK	R.V.
		(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0574)		1.440	0.192	3.00	28.23
OUTFLOW: ID= 1 (0276)		1.440	0.013	4.08	27.85

1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)=	61.93	20.90	
over (min)	5.00	25.00	
Storage Coeff. (min)=	6.69 (ii)	22.94 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.18	0.05	
PEAK FLOW (cms)=	1.54	0.20	1.636 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	9.53	21.78
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.24	0.54

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (0572)				
ID= 1 DT= 5.0 min				
		Area (ha)=	11.31	
		Total Imp(%)=	71.00	Dir. Conn.(%)= 50.00
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	8.03	3.28	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	274.59	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 44.53
over (min) 5.00 20.00
Storage Coeff. (min)= 5.67 (ii) 17.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

TOTALS
PEAK FLOW (cms)= 0.91 0.23 1.061 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 34.03 15.32 24.67
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.38 0.62

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0282)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0571):	19.59	1.636	3.00	21.78
+ ID2= 2 (0572):	11.31	1.061	3.00	24.67
=====				
ID = 3 (0282):	30.90	2.697	3.00	22.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0573)				
ID= 1 DT= 5.0 min				
	Area (ha)=	2.66		
	Total Imp(%)=	60.00	Dir. Conn.(%)=	60.00
	IMPERVIOUS PERVIOUS (i)			
Surface Area (ha)=	1.60	1.06		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		

Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 10.21
over (min) 5.00 30.00
Storage Coeff. (min)= 3.67 (ii) 25.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.25 0.04

PEAK FLOW (cms)= 0.27 0.02 0.275 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 8.72 23.90
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22 0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0285)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0282):	30.90	2.697	3.00	22.84
+ ID2= 2 (0573):	2.66	0.275	3.00	23.90
=====				
ID = 3 (0285):	33.56	2.972	3.00	22.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0280)				
IN= 2----> OUT= 1				
DT= 5.0 min				
	OVERFLOW IS OFF			
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.2300	1.1312
	0.0230	0.3704	0.2810	1.3850
	0.0900	0.8066	0.4120	2.2335
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0285)	33.560	2.972	3.00	22.92
OUTFLOW: ID= 1 (0280)	33.560	0.073	6.08	22.43

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.44
TIME SHIFT OF PEAK FLOW (min)=185.00
MAXIMUM STORAGE USED (ha.m.)= 0.6937

ADD HYD (0102)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0274):	28.29	0.057	6.08	18.68
+ ID2= 2 (0275):	2.38	0.022	4.08	27.96
=====				
ID = 3 (0102):	30.67	0.076	6.00	19.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	30.67	0.076	6.00	19.40
+ ID2= 2 (0280):	33.56	0.073	6.08	22.43
=====				

ID = 1 (0102): 64.23 0.149 6.00 20.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0102):	64.23	0.149	6.00	20.99
+ ID2= 2 (0481):	18.79	1.270	3.00	16.68
=====				
ID = 3 (0102):	83.02	1.322	3.00	20.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	83.02	1.322	3.00	20.01
+ ID2= 2 (0502):	117.52	0.973	3.67	8.61
=====				
ID = 1 (0102):	200.54	1.812	3.00	13.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0503) |
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 /0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 /0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	

297.51 87.86 0.0900
324.73 87.89 0.0900
351.95 87.78 0.0900
388.59 87.46 0.0900

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.17	84.38	.114E+03	0.1	0.34	18.34	
0.33	84.54	.269E+03	0.4	0.50	12.51	
0.50	84.71	.465E+03	0.8	0.62	10.07	
0.67	84.88	.703E+03	1.4	0.72	8.63	
0.83	85.04	.982E+03	2.1	0.81	7.65	
1.00	85.21	.130E+04	3.1	0.89	6.93	
1.21	85.42	.177E+04	5.0	1.06	5.87	
1.41	85.62	.234E+04	7.4	1.17	5.28	
1.62	85.83	.300E+04	10.2	1.27	4.89	
1.83	86.04	.376E+04	13.6	1.35	4.60	
2.03	86.24	.462E+04	17.6	1.42	4.37	
2.24	86.45	.560E+04	22.1	1.47	4.22	
2.45	86.66	.695E+04	27.6	1.48	4.20	
2.66	86.87	.925E+04	31.2	1.25	4.94	
2.86	87.07	.168E+05	43.1	0.96	6.48	
3.07	87.28	.297E+05	67.7	0.85	7.30	
3.28	87.49	.456E+05	103.1	0.84	7.38	
3.48	87.69	.663E+05	159.6	0.89	6.93	
3.69	87.90	.907E+05	223.4	0.92	6.77	
<---- hydrograph ----> <-pipe / channel->						
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0102)	200.54	1.81	3.00	13.33	0.76	0.77
OUTFLOW: ID= 1 (0503)	200.54	1.44	3.08	13.33	0.68	0.73

CALIB			
STANDHYD (5032)	Area (ha)=	13.80	
ID= 1 DT= 5.0 min	Total Imp(%)=	76.00	Dir. Conn.(%)= 67.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.49	3.31
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59
Max.Eff.Inten.(mm/hr)=		61.93	20.79				
over (min)		5.00	25.00				
Storage Coeff. (min)=		6.02 (ii)	22.31 (ii)				
Unit Hyd. Tpeak (min)=		5.00	25.00				
Unit Hyd. peak (cms)=		0.19	0.05				
				TOTALS			
PEAK FLOW (cms)=		1.48	0.11	1.529 (iii)			
TIME TO PEAK (hrs)=		3.00	3.33	3.00			
RUNOFF VOLUME (mm)=		34.03	10.67	26.32			
TOTAL RAINFALL (mm)=		40.03	40.03	40.03			
RUNOFF COEFFICIENT =		0.85	0.27	0.66			

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0503):	200.54	1.441	3.08	13.33

+ ID2= 2 (5032): 13.80 1.529 3.00 26.32
=====

ID = 3 (0104): 214.34 2.884 3.00 14.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)			
IN= 2--> OUT= 1	Routing time step (min)=	5.00	
<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30

<---- hydrograph ----> <-pipe / channel->							
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL		
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)		
INFLOW : ID= 2 (0104)	214.34	2.88	3.00	14.16	0.65	0.30	
OUTFLOW: ID= 1 (0504)	214.34	1.88	3.17	14.16	0.60	0.29	

CALIB			
STANDHYD (5042)	Area (ha)=	7.70	
ID= 1 DT= 5.0 min	Total Imp(%)=	75.00	Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	5.77	1.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	226.57	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59

1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 19.38
over (min) 5.00 25.00
Storage Coeff. (min)= 5.05 (ii) 21.81 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.21 0.05

PEAK FLOW (cms)= 0.82 0.06
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 9.84
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.25

TOTALS
0.847 (iii)
3.00
25.56
40.03
0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0504):	214.34	1.884	3.17	14.16
+ ID2= 2 (5042):	7.70	0.847	3.00	25.56
=====				
ID = 3 (0106):	222.04	2.398	3.00	14.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min

	Area (ha)=	Dir. Conn.(%)=
Surface Area	11.78	
Dep. Storage	6.00	
Average Slope	1.00	
Length	323.52	
Mannings n	0.013	

IMPERVIOUS PERVIOUS (i)
3.93
8.00
1.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 29.70
over (min) 5.00 25.00
Storage Coeff. (min)= 6.26 (ii) 20.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

PEAK FLOW (cms)= 1.64 0.16
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 12.97
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.32

TOTALS
1.726 (iii)
3.00
26.87
40.03
0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0114)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0106):	222.04	2.398	3.00	14.56
+ ID2= 2 (5212):	15.70	1.726	3.00	26.87
=====				
ID = 3 (0114):	237.74	4.124	3.00	15.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2----> OUT= 1

Routing time step (min)= 5.00

----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100
69.13	79.02	0.1100
92.42	79.04	0.1100
98.70	80.89	0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100
266.11	81.68	0.1100
306.94	81.73	0.1100
331.74	81.55	0.1100 / 0.0700
336.74	80.15	0.0700
346.34	81.64	0.0700 / 0.0900
394.77	81.68	0.0900
431.64	81.44	0.0900
477.44	82.08	0.0900
481.25	82.81	0.0900
501.51	83.16	0.0900

Main Channel
Main Channel

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83

	2.07	81.09	.128E+05	43.8	0.59	4.86
	2.19	81.21	.155E+05	40.6	0.45	6.35

hydrograph
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
INFLOW : ID= 2 (0114) 237.74 4.12 3.00 15.37
OUTFLOW: ID= 1 (0505) 237.74 3.51 3.08 15.37

<--- pipe / channel --->
MAX DEPTH (m) MAX VEL (m/s)
0.44 0.38
0.40 0.36

CALIB
STANDHYD (5052)
ID= 1 DT= 5.0 min

	Area (ha)=	Dir. Conn.(%)=
Surface Area	11.77	
Dep. Storage	6.00	
Average Slope	1.00	
Length	325.58	
Mannings n	0.013	

IMPERVIOUS PERVIOUS (i)
4.13
8.00
1.00
40.00
0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 17.84

over (min) 5.00 25.00
Storage Coeff. (min)= 6.28 (ii) 23.60 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

PEAK FLOW (cms)= 1.64 0.11 1.692 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 9.46 25.43
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.24 0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0505): 237.74 3.511 3.08 15.37
+ ID2= 2 (5052): 15.90 1.692 3.00 25.43
ID = 3 (0108): 253.64 4.968 3.00 16.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2---> OUT= 1
Routing time step (min)'= 5.00

DATA FOR SECTION (304.1) -----
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900
45.97 80.05 0.0900
65.23 79.93 0.0900
84.49 80.35 0.0900
113.49 80.02 0.0900
136.48 80.07 0.0900
188.81 79.81 0.0900
197.86 79.25 0.0900 / 0.0700 Main Channel
200.70 78.22 0.0700 Main Channel
203.29 79.35 0.0700 / 0.0900 Main Channel
204.01 79.67 0.0900

236.47 80.40 0.0900
277.80 80.48 0.0900
305.35 80.37 0.0900
346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

hydrograph
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.64 4.97 3.00 16.00 1.25 1.14
OUTFLOW: ID= 1 (0506) 253.64 4.63 3.00 16.00 1.22 1.13

CALIB
STANDHYD (5062)
ID= 1 DT= 5.0 min
Area (ha)= 11.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.78 2.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 279.28 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 21.58
over (min) 5.00 25.00
Storage Coeff. (min)= 5.73 (ii) 21.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

PEAK FLOW (cms)= 1.22 0.10 1.272 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.86 25.92
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.27 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)

1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0506): 253.64 4.632 3.08 16.00
+ ID2= 2 (5062): 11.70 1.272 3.00 25.92
ID = 3 (0110): 265.34 5.450 3.00 16.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min
Area (ha)= 1.70
Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.27
over (min) 5.00 25.00
Storage Coeff. (min)= 3.21 (ii) 21.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00

Unit Hyd. peak (cms)= 0.27 0.05
PEAK FLOW (cms)= 0.15 0.02
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 8.76
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22

TOTALS

0.158 (iii)
3.00
21.90
40.03
0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 / 0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 / 0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

Main Channel
Main Channel
Main Channel

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88

1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 20.16
over (min)= 5.00 25.00
Storage Coeff. (min)= 3.81 (ii) 20.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05
PEAK FLOW (cms)= 0.29 0.03
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 10.52
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26

TOTALS

0.307 (iii)
3.00
24.15
40.03
0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)
1 + 2 = 3 AREA OPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0511): 1.70 0.117 3.00 21.89
+ ID2= 2 (5112): 3.00 0.307 3.00 24.15
ID = 3 (0117): 4.70 0.424 3.00 23.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning
0.00	80.80	0.0900
9.73	80.46	0.0900
14.10	82.04	0.0900
17.18	82.28	0.0900
41.13	82.12	0.0900 / 0.0700
46.88	79.71	0.0700
51.41	80.90	0.0700 / 0.0900
94.29	80.56	0.0900

Main Channel
Main Channel
Main Channel

1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ----> <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5102) 1.70 0.16 3.00 21.90 0.03 0.24
OUTFLOW: ID= 1 (0511) 1.70 0.12 3.00 21.89 0.02 0.24

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min Area (ha)= 3.00
Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.07	0.93
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	141.42	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59

175.64	80.72	0.0900
192.09	80.85	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ----> <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0117) 4.70 0.42 3.00 23.33 0.59 0.38
OUTFLOW: ID= 1 (0512) 4.70 0.23 3.00 23.27 0.47 0.33

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min Area (ha)= 3.90
Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.65	1.25
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	161.25	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 19.82
over (min) 5.00 25.00
Storage Coeff. (min)= 4.12 (ii) 20.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.24 0.05

PEAK FLOW (cms)= 0.37 0.04 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.44 23.88
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.234	3.08	23.27
+ ID2= 2 (5122):	3.90	0.390	3.00	23.88

=====

ID = 3 (0119): 8.60 0.606 3.00 23.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.34	5.450	3.00	16.44
+ ID2= 2 (0119):	8.60	0.606	3.00	23.55
ID = 3 (0120):	273.94	6.056	3.00	16.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6011)				
ID= 1 DT= 5.0 min				
	Area	(ha)	Curve Number	(CN)= 62.0
	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.83		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.275 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6012)			
ID= 1 DT= 5.0 min			
	Area	(ha)= 11.00	
	Total Imp(%)=	28.00	Dir. Conn.(%)= 16.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)= 3.08	7.92	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 270.00	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 8.91
over (min) 5.00 30.00
Storage Coeff. (min)= 5.63 (ii) 28.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00

Unit Hyd. peak (cms)= 0.20 0.04 *TOTALS*
PEAK FLOW (cms)= 0.28 0.11 0.323 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.61 10.99
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.27

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	0.275	3.92	5.47
+ ID2= 2 (6012):	11.00	0.323	3.00	10.99
ID = 3 (0124):	55.10	0.372	3.75	6.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)				
ID= 1 DT= 5.0 min				
	Area	(ha)= 43.60	Curve Number	(CN)= 62.0
	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59

0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.247 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6022)	Area (ha)= 12.90
ID= 1 DT= 5.0 min	Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.51	8.38
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	293.26	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)	
IN= 2----> OUT= 1	Routing time step (min)= 5.00

<----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning
0.00	92.58	0.1400
8.54	92.59	0.1400
22.11	92.47	0.1400
48.74	91.83	0.1400
67.59	91.58	0.1400
86.45	91.21	0.1400
103.50	90.80	0.1400
118.09	90.23	0.1400
127.84	90.09	0.1400 / 0.0700
129.84	89.59	0.0700
130.34	90.09	0.0700 / 0.1400
140.57	90.14	0.1400
161.87	90.11	0.1400
177.03	90.04	0.1400
188.67	89.87	0.1400
199.59	90.31	0.1400
212.02	90.96	0.1400
225.58	91.35	0.1400
252.71	91.66	0.1400
274.11	91.86	0.1400

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98

0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 9.23
over (min)= 5.00 30.00
Storage Coeff. (min)= 5.90 (ii) 28.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.19 0.04

TOTALS
PEAK FLOW (cms)= 0.48 0.12 0.519 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.72 13.00
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.32

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6021):	43.60	0.247	4.08	5.47
+ ID2= 2 (6022):	12.90	0.519	3.00	13.00
ID = 3 (0125):	56.50	0.549	3.00	7.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	0.372	3.75	6.57
+ ID2= 2 (0125):	56.50	0.549	3.00	7.19
ID = 3 (0126):	111.60	0.915	3.00	6.88

2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	0.92	3.00	6.88	0.52	0.20
OUTFLOW: ID= 1 (0603)	111.60	0.52	4.83	6.88	0.48	0.20

CALIB	
NASHYD (0613)	Area (ha)= 1.77 Curve Number (CN)= 66.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.22

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.032 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 6.291
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.157

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6222)
ID= 1 DT= 5.0 min

Area (ha)= 2.02
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	0.44
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	116.05	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	8.35
over (min)	5.00	30.00
Storage Coeff. (min)=	3.38 (ii)	26.84 (ii)
Unit Hyd. Tpeak (min)=	5.00	30.00
Unit Hyd. peak (cms)=	0.26	0.04
TOTALS		
PEAK FLOW (cms)=	0.27	0.01
TIME TO PEAK (hrs)=	3.00	3.42
RUNOFF VOLUME (mm)=	34.03	7.24
		28.13

TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.18	0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0614)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 69.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.04	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	100.00	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	21.90

over (min)	5.00	20.00
Storage Coeff. (min)=	3.09 (ii)	19.05 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.27	0.06
TOTALS		
PEAK FLOW (cms)=	0.13	0.02
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	34.03	9.66
TOTAL RAINFALL (mm)=	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.24
		0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0615)
ID= 1 DT= 5.0 min

Area (ha)= 2.14
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.67	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	119.44	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0618)
ID= 1 DT= 5.0 min

Area (ha)= 1.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.16	0.33
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	99.67	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38

0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 49.00
over (min) 5.00 15.00
Storage Coeff. (min)= 3.09 (ii) 14.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

TOTALS

PEAK FLOW (cms)= 0.13 0.03 0.149 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 34.03 13.07 23.54
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.33 0.59

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302)
ID= 1 DT= 5.0 min

Area (ha)= 0.86
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	0.81	0.05	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	75.72	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 11.27
over (min) 5.00 10.00
Storage Coeff. (min)= 2.62 (ii) 6.12 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.15

TOTALS

PEAK FLOW (cms)= 0.14 0.00 0.139 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 5.67 32.33
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.14 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0617)
ID= 1 DT= 5.0 min

Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS		PERVIOUS (i)	

Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 70.42
over (min) 5.00 15.00
Storage Coeff. (min)= 3.52 (ii) 13.52 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.08

TOTALS

PEAK FLOW (cms)= 0.19 0.06 0.241 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 15.68 24.85
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.39 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0290)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0614):	1.50	0.138	3.00 21.84
+ ID2= 2 (0615):	2.14	0.284	3.00 28.13
=====			
ID = 3 (0290):	3.64	0.423	3.00 25.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
3 + 2 = 1

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0290):	3.64	0.423	3.00 25.54
+ ID2= 2 (0617):	2.31	0.241	3.00 24.85
=====			
ID = 1 (0290):	5.95	0.663	3.00 25.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0290):	5.95	0.663	3.00 25.27
+ ID2= 2 (0618):	1.49	0.149	3.00 23.54
=====			
ID = 3 (0290):	7.44	0.813	3.00 24.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
3 + 2 = 1

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0290):	7.44	0.813	3.00 24.93
+ ID2= 2 (6222):	2.02	0.268	3.00 28.13
=====			
ID = 1 (0290):	9.46	1.081	3.00 25.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0290):	9.46	1.081	3.00	25.61
+ ID2= 2 (6302):	0.86	0.139	3.00	32.33
=====				
ID = 3 (0290):	10.32	1.220	3.00	26.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6212)
ID= 1 DT= 5.0 min

Area (ha)=	1.15
Total Imp(%)=	65.00
Dir. Conn.(%)=	65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.75	0.40
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	87.56	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	5.71

over (min)	5.00	35.00	
Storage Coeff. (min)=	2.86 (ii)	30.16 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.28	0.04	
		TOTALS	
PEAK FLOW (cms)=	0.13	0.00	0.128 (iii)
TIME TO PEAK (hrs)=	3.00	3.50	3.00
RUNOFF VOLUME (mm)=	34.03	5.67	24.09
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6232)
ID= 1 DT= 5.0 min

Area (ha)=	0.85
Total Imp(%)=	65.00
Dir. Conn.(%)=	65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.55	0.30
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	75.28	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59

Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	5.71	
over (min)	5.00	30.00	
Storage Coeff. (min)=	2.61 (ii)	29.91 (ii)	
Unit Hyd. Tpeak (min)=	5.00	30.00	
Unit Hyd. peak (cms)=	0.29	0.04	
		TOTALS	
PEAK FLOW (cms)=	0.09	0.00	0.095 (iii)
TIME TO PEAK (hrs)=	3.00	3.42	3.00
RUNOFF VOLUME (mm)=	34.03	5.67	24.08
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6212):	1.15	0.128	3.00	24.09
+ ID2= 2 (6232):	0.85	0.095	3.00	24.08
=====				
ID = 3 (0288):	2.00	0.224	3.00	24.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0626)
ID= 1 DT= 5.0 min

Area (ha)=	0.96
Total Imp(%)=	60.00
Dir. Conn.(%)=	60.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.58	0.38
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	80.00	40.00

Max.Eff.Inten.(mm/hr)=	61.93	14.36	
over (min)	5.00	25.00	
Storage Coeff. (min)=	2.71 (ii)	21.59 (ii)	
Unit Hyd. Tpeak (min)=	5.00	25.00	
Unit Hyd. peak (cms)=	0.29	0.05	
		TOTALS	
PEAK FLOW (cms)=	0.10	0.01	0.102 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	10.28	24.52
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.26	0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0288):	2.00	0.224	3.00	24.09
+ ID2= 2 (0290):	10.32	1.220	3.00	26.17
=====				
ID = 3 (0297):	12.32	1.444	3.00	25.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0297):	12.32	1.444	3.00	25.83
+ ID2= 2 (0613):	1.77	0.032	3.00	6.29
=====				
ID = 1 (0297):	14.09	1.469	3.00	23.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0297):	14.09	1.469	3.00	23.38
+ ID2= 2 (0626):	0.96	0.102	3.00	24.52
=====				
ID = 3 (0297):	15.05	1.572	3.00	23.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0302)				
IN= 2----> OUT= 1				
DT= 5.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.1070	0.3146
	0.0150	0.1715	0.7100	0.8031
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0297)	15.050	1.572	3.00	23.45
OUTFLOW: ID= 1 (0302)	15.050	0.083	5.08	23.26
=====				
PEAK FLOW REDUCTION [Qout/Qin](%)= 5.28				
TIME SHIFT OF PEAK FLOW (min)=125.00				
MAXIMUM STORAGE USED (ha.m.)= 0.2775				

CALIB			
STANDHYD (6202)			
ID= 1 DT= 5.0 min			

Area (ha)=	1.26		
Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.18	0.08
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	91.65	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	11.27	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.94 (ii)	6.44 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.28	0.14	
TOTALS			
PEAK FLOW (cms)=	0.20	0.00	0.203 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	34.03	5.67	32.33
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0292)				
IN= 2----> OUT= 1				
DT= 5.0 min				

OVERFLOW IS OFF				
	OUTFLOW	STORAGE	OUTFLOW	STORAGE
	(cms)	(ha.m.)	(cms)	(ha.m.)
	0.0000	0.0000	0.0580	0.0848
	0.0090	0.0366	0.0000	0.0000
=====				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (6202)	1.260	0.203	3.00	32.33
OUTFLOW: ID= 1 (0292)	1.260	0.008	5.08	31.51
=====				
PEAK FLOW REDUCTION [Qout/Qin](%)= 3.95				
TIME SHIFT OF PEAK FLOW (min)=125.00				
MAXIMUM STORAGE USED (ha.m.)= 0.0327				

CALIB			
STANDHYD (0606)			
ID= 1 DT= 5.0 min			

Area (ha)=	1.98		
Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.29	0.69
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	114.89	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38

0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	5.71	
over (min)	5.00	35.00	
Storage Coeff. (min)=	3.36 (ii)	30.67 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.26	0.04	
TOTALS			
PEAK FLOW (cms)=	0.22	0.01	0.220 (iii)
TIME TO PEAK (hrs)=	3.00	3.50	3.00
RUNOFF VOLUME (mm)=	34.03	5.67	24.10
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.14	0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0612)			
ID= 1 DT= 5.0 min			

Area (ha)=	2.18		
Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.05	0.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	120.55	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	2.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	2.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	2.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	2.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59
Max.Eff.Inten.(mm/hr)= 61.93 11.27							
over (min) 5.00 10.00							
Storage Coeff. (min)= 3.46 (ii) 6.96 (ii)							
Unit Hyd. Tpeak (min)= 5.00 10.00							
Unit Hyd. peak (cms)= 0.26 0.14							
TOTALS							
PEAK FLOW (cms)= 0.35 0.00 0.349 (iii)							
TIME TO PEAK (hrs)= 3.00 3.08 3.00							
RUNOFF VOLUME (mm)= 34.03 5.67 32.33							
TOTAL RAINFALL (mm)= 40.03 40.03 40.03							
RUNOFF COEFFICIENT = 0.85 0.14 0.81							

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0295)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1000	0.1464

0.0159 0.0631 | 0.0000 0.0000

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
2.180	0.349	3.00	32.33
2.180	0.014	5.08	31.87

INFLOW : ID= 2 (0612)
OUTFLOW: ID= 1 (0295)

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.07
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0564

ADD HYD (0306)
1 + 2 = 3

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1.26	0.008	5.08	31.51
2.18	0.014	5.08	31.87

ID1= 1 (0292):
+ ID2= 2 (0295):
ID = 3 (0306): 3.44 0.022 5.08 31.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306)
3 + 2 = 1

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3.44	0.022	5.08	31.74
1.98	0.220	3.00	24.10

ID1= 3 (0306):
+ ID2= 2 (0606):
ID = 1 (0306): 5.42 0.235 3.00 28.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning
0.00	92.50	0.0700
36.57	92.00	0.0700
90.03	91.00	0.0700
124.58	90.00	0.0700 /0.0350
128.34	89.59	0.0350
129.84	89.59	0.0350
132.39	90.00	0.0350 /0.0700
163.76	91.00	0.0700

187.47 91.00 0.0700
203.83 91.00 0.0700
306.44 92.00 0.0700

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

<----- hydrograph ----->

<-pipe / channel->

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
5.42	0.23	3.00	28.95	0.14	0.53
5.42	0.10	3.08	28.94	0.10	0.46

INFLOW : ID= 2 (0306)
OUTFLOW: ID= 1 (0304)

CALIB
STANDHYD (0616)
ID= 1 DT= 5.0 min

IMPERVIOUS PERVIOUS (i)

Surface Area	(ha)=	0.34	0.10
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	54.16	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min

Area	(ha)=	2.49
Total Imp(%)	=	78.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 91.31
over (min) 5.00 15.00
Storage Coeff. (min)= 3.60 (ii) 12.61 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08
TOTALS
PEAK FLOW (cms)= 0.21 0.08 0.279 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 34.03 20.31 27.17
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.51 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0624)
ID= 1 DT= 5.0 min
Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 14.36
over (min) 5.00 25.00
Storage Coeff. (min)= 2.65 (ii) 21.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.29 0.05
TOTALS
PEAK FLOW (cms)= 0.12 0.00 0.121 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.28 28.79
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0286)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6102):	2.49	0.279	3.00	27.17
+ ID2= 2 (0616):	0.44	0.060	3.00	28.78
=====				
ID = 3 (0286):	2.93	0.339	3.00	27.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0286)				
3 + 2 = 1	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0286):	2.93	0.339	3.00	27.41
+ ID2= 2 (0624):	0.89	0.121	3.00	28.79
=====				
ID = 1 (0286):	3.82	0.459	3.00	27.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0305)				
IN= 2---> OUT= 1	OVERFLOW IS OFF			
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1760	0.2330
	0.0280	0.0927	0.0000	0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0286) 3.820 0.459 3.00 27.73
OUTFLOW: ID= 1 (0305) 3.820 0.025 5.08 27.51

PEAK FLOW REDUCTION [Qout/Qin](%)= 5.35
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.0814

CALIB
STANDHYD (0619)
ID= 1 DT= 5.0 min
Area (ha)= 1.64
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.07 0.57
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 17.42
over (min) 5.00 25.00
Storage Coeff. (min)= 3.18 (ii) 20.66 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05
TOTALS
PEAK FLOW (cms)= 0.18 0.02 0.188 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 12.21 26.39
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.30 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0293)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0302):	15.05	0.083	5.08	23.26
+ ID2= 2 (0304):	5.42	0.103	3.08	28.94
=====				
ID = 3 (0293):	20.47	0.144	3.50	24.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0293):	20.47	0.144	3.50	24.76
+ ID2= 2 (0305):	3.82	0.025	5.08	27.51
=====				
ID = 1 (0293):	24.29	0.167	3.58	25.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0293):	24.29	0.167	3.58	25.19
+ ID2= 2 (0619):	1.64	0.188	3.00	26.39
=====				
ID = 3 (0293):	25.93	0.313	3.00	25.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6032)				
ID= 1 DT= 5.0 min	Area (ha)=	29.63		
	Total Imp(%)=	47.00	Dir. Conn.(%)=	32.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	13.93	15.70
Dep. Storage (mm)=	1.50	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	444.45	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38		
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38		
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38		
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38		
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38		
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38		
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59		
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59		
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59		
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59		
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59		
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59		
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59		
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59		
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59		
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59		
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59		
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59		

Max.Eff.Inten.(mm/hr)=	61.93	18.66	
over (min)	10.00	25.00	
Storage Coeff. (min)=	7.57 (ii)	24.58 (ii)	
Unit Hyd. Tpeak (min)=	10.00	25.00	
Unit Hyd. peak (cms)=	0.13	0.05	
PEAK FLOW (cms)=	1.35	0.43	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.33	1.556 (iii)
RUNOFF VOLUME (mm)=	38.53	10.31	3.00
TOTAL RAINFALL (mm)=	40.03	40.03	19.34
RUNOFF COEFFICIENT =	0.96	0.26	40.03
			0.48

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0293):	25.93	0.313	3.00	25.27
+ ID2= 2 (0603):	111.60	0.522	4.83	6.88
=====				
ID = 3 (0128):	137.53	0.682	4.83	10.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0128):	137.53	0.682	4.83	10.35
+ ID2= 2 (6032):	29.63	1.556	3.00	19.34
=====				
ID = 1 (0128):	167.16	2.043	3.00	11.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)				
IN= 2---- OUT= 1				
Routing time step (min)= 5.00				

<----- DATA FOR SECTION (1414.9) ----->				
Distance	Elevation	Manning		
0.00	86.75	0.0900		
3.09	87.40	0.0900		
18.33	87.41	0.0900		
35.33	86.99	0.0900		
73.84	86.75	0.0900		
103.33	86.41	0.0900		
120.33	86.11	0.0900		
129.46	86.13	0.0900		
143.37	85.32	0.0900		
154.33	85.02	0.0900		
161.57	85.09	0.0900		
163.05	84.78	0.0900 / 0.0700	Main Channel	
166.55	83.78	0.0700	Main Channel	
168.05	84.78	0.0700 / 0.1100	Main Channel	
172.02	85.29	0.1100		
191.39	86.19	0.1100		
270.18	85.78	0.1100		

296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<----- hydrograph ----->				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW: ID= 2 (0128)	167.16	2.04	3.00	11.94
OUTFLOW: ID= 1 (0604)	167.16	0.75	3.58	11.93

***** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB				
STANDHYD (6042)				
ID= 1 DT= 5.0 min	Area (ha)=	24.00		
	Total Imp(%)=	78.00	Dir. Conn.(%)=	69.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.72	5.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	400.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

+ ID2= 2 (6042): 24.00 2.697 3.00 27.93

=====

ID = 3 (0130): 191.16 3.313 3.00 13.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2--- OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 / 0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100
404.40	82.68	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 34.27
over (min) 5.00 25.00
Storage Coeff. (min)= 7.11 (ii) 20.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.17 0.05

PEAK FLOW (cms)= 2.57 0.25 2.697 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 34.03 14.35 27.93
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.36 0.70

TOTALS

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0604):	167.16	0.751	3.58	11.93

1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0130)	191.16	3.31	3.00	13.94	0.91	0.30
OUTFLOW: ID= 1 (0605)	191.16	1.28	3.50	13.94	0.77	0.25

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min

Area (ha)= 11.40
Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.21 3.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59

1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 27.44
over (min) 5.00 25.00
Storage Coeff. (min)= 5.69 (ii) 20.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

PEAK FLOW (cms)= 1.14 0.12 1.199 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 12.07 25.69
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.30 0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0605):	191.16	1.280	3.50	13.94
+ ID2= 2 (6112):	11.40	1.199	3.00	25.69
ID = 3 (0139):	202.56	2.192	3.00	14.60

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min

Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.60
over (min) 5.00 25.00
Storage Coeff. (min)= 6.28 (ii) 24.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

TOTALS

PEAK FLOW (cms)= 1.64 0.10 1.688 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.85 25.22
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22 0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)				
1	2	3	AREA	QPEAK
			(ha)	(cms)
				TPEAK
				(hrs)
				R.V.
				(mm)
ID1= 1 (0139):	202.56	2.192	3.00	14.60
+ ID2= 2 (6052):	15.90	1.688	3.00	25.22
=====				
ID = 3 (0132):	218.46	3.880	3.00	15.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (350.0)			
Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 / 0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 / 0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

TRAVEL TIME TABLE					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72

2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30
hydrograph					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.46	3.88	3.00	0.54	0.59
OUTFLOW: ID= 1 (0530)	218.46	2.86	3.08	0.47	0.54

CALIB			
STANDHYD (5302)	Area	(ha)=	5.80
ID= 1 DT= 5.0 min	Total Imp(%)=	66.00	Dir. Conn.(%)= 56.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	3.83	1.97
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	196.64	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 15.25

over (min) 5.00 25.00
Storage Coeff. (min)= 4.64 (ii) 23.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.22 0.05

TOTALS

PEAK FLOW (cms)= 0.54 0.05 0.558 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.49 22.79
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.21 0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1	2	3	AREA	QPEAK
			(ha)	(cms)
				TPEAK
				(hrs)
				R.V.
				(mm)
ID1= 1 (0530):	218.46	2.856	3.08	15.37
+ ID2= 2 (5302):	5.80	0.558	3.00	22.79
=====				
ID = 3 (0134):	224.26	3.121	3.08	15.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1	2	3	AREA	QPEAK
			(ha)	(cms)
				TPEAK
				(hrs)
				R.V.
				(mm)
ID1= 1 (0120):	273.94	6.056	3.00	16.66
+ ID2= 2 (0134):	224.26	3.121	3.08	15.57
=====				
ID = 3 (0135):	498.20	9.169	3.00	16.17

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (40.0)		
Distance	Elevation	Manning

0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->					
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.20	9.17	3.00	16.17	1.56
OUTFLOW: ID= 1 (0507)	498.20	6.43	3.25	16.17	1.35

CALIB	
STANDHYD (5072)	Area (ha)= 48.90
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 36.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	24.45	24.45
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	570.96	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	20.04
over (min)	10.00	30.00
Storage Coeff. (min)=	8.80 (ii)	25.33 (ii)
Unit Hyd. Tpeak (min)=	10.00	30.00
Unit Hyd. peak (cms)=	0.12	0.04
TOTALS		
PEAK FLOW (cms)=	2.41	0.69
TIME TO PEAK (hrs)=	3.00	3.42
RUNOFF VOLUME (mm)=	34.03	11.03
TOTAL RAINFALL (mm)=	40.03	40.03

RUNOFF COEFFICIENT = 0.85 0.28 0.48

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)	
1 + 2 = 3	
ID1= 1 (0507):	498.20 6.428 3.25 16.17
+ ID2= 2 (5072):	48.90 2.677 3.00 19.31
ID = 3 (0122):	547.10 8.314 3.08 16.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (5402)	Area (ha)= 9.40
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	4.70	4.70
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	250.33	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	15.40
over (min)	5.00	25.00
Storage Coeff. (min)=	5.37 (ii)	23.73 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.21	0.05
TOTALS		
PEAK FLOW (cms)=	0.53	0.11
TIME TO PEAK (hrs)=	3.00	3.33
RUNOFF VOLUME (mm)=	34.03	8.53
TOTAL RAINFALL (mm)=	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.21

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505)	
ID= 1 DT= 5.0min	AREA (ha)= 30.00
	QPEAK (cms)= 0.78
	TPEAK (hrs)= 15.58
	VOLUME (mm)= 402.14

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25

17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11

21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11

26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10

2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.33
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29

6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.2

10.67	0.00	41.17	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18

14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15

19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13

23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12

27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.1		

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	3.68	1.50	9.19	3.00	20.22	4.50	5.51
0.17	3.68	1.67	9.19	3.17	20.22	4.67	5.51
0.33	3.68	1.83	9.19	3.33	20.22	4.83	5.51
0.50	5.51	2.00	11.03	3.50	9.19	5.00	3.68
0.67	5.51	2.17	11.03	3.67	9.19	5.17	3.68
0.83	5.51	2.33	11.03	3.83	9.19	5.33	3.68
1.00	5.51	2.50	55.14	4.00	7.35	5.50	3.68
1.17	5.51	2.67	99.25	4.17	7.35	5.67	3.68
1.33	5.51	2.83	143.36	4.33	7.35	5.83	3.68

CALIB							
NASHYD (5011)	Area (ha)=	80.20	Curve Number (CN)=	65.0			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.85					

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.123 (i)
TIME TO PEAK (hrs)= 3.833

RUNOFF VOLUME (mm)= 31.899
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.347

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB							
STANDHYD (5012)	Area (ha)=	37.32	Curve Number (CN)=	69.3			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.07					

IMPERVIOUS PVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 90.00
over (min)= 5.00 15.00
Storage Coeff. (min)= 5.80 (ii) 14.86 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 3.33 3.12 5.902 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 37.01 48.74
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.53

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)					
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	
ID1= 1 (5011):	80.20	3.123	3.83	31.90	
+ ID2= 2 (5012):	37.32	5.902	3.00	48.74	
ID = 3 (0100):	117.52	6.639	3.00	37.25	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2---> OUT= 1 | Routing time step (min)= 5.00

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	

187.19 88.84 0.1100
211.21 88.88 0.1100

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.499E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
117.52	6.64	3.00	37.25	1.20	0.57
117.52	4.27	3.92	37.24	1.09	0.65

CALIB							
NASHYD (5691)	Area (ha)=	2.30	Curve Number (CN)=	69.3			
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00			
	U.H. Tp(hrs)=	0.07					

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51

0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.420 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 32.950
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.359

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
NASHYD (5021)	Area (ha)= 3.67	Curve Number (CN)= 68.8	
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00	
	U.H. Tp(hrs)= 0.43		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68

1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.261 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 35.402
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.385

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5092)	Area (ha)= 1.73		
ID= 1 DT= 5.0 min	Total Imp(%)= 50.60	Dir. Conn.(%)= 50.60	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.88	0.85
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	107.39	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68

1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36
over (min) 5.00
Storage Coeff. (min)= 2.31 (ii) 11.00 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.30
0.09

TOTALS
PEAK FLOW (cms)= 0.35 0.15 0.475 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 50.07 68.19
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.54 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5082)	Area (ha)= 0.71		
ID= 1 DT= 5.0 min	Total Imp(%)= 73.00	Dir. Conn.(%)= 64.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.52	0.19
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	68.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51

0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36
over (min) 5.00
Storage Coeff. (min)= 1.77 (ii) 10.54 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.32
0.09

TOTALS
PEAK FLOW (cms)= 0.18 0.03 0.208 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 37.04 68.30
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5682)	Area (ha)= 0.53		
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00	Dir. Conn.(%)= 65.00	

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.34	0.19
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	59.44	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 52.83
over (min) 5.00 15.00
Storage Coeff. (min)= 1.62 (ii) 12.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.32 0.08

PEAK FLOW (cms)= 0.14 0.02 0.152 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 31.47 66.83
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.34 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	6.23	
STANDHYD (0501)	Total Imp(%)=	42.00	Dir. Conn.(%)= 42.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	2.62	3.61	

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 203.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 44.23
over (min) 5.00 20.00
Storage Coeff. (min)= 3.39 (ii) 15.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.07

PEAK FLOW (cms)= 1.02 0.26 1.202 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 85.90 26.58 51.49
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.29 0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	0.76	
STANDHYD (0510)	Total Imp(%)=	78.00	Dir. Conn.(%)= 78.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.59	0.17	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	71.18	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 100.05
over (min) 5.00 10.00
Storage Coeff. (min)= 1.80 (ii) 6.34 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.15

PEAK FLOW (cms)= 0.24 0.04 0.273 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 50.07 78.01
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.54 0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	0.78	
STANDHYD (5752)	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.51	0.27	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	72.11	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 87.27
over (min) 5.00 15.00
Storage Coeff. (min)= 1.82 (ii) 10.99 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.32 0.09

PEAK FLOW (cms)= 0.20 0.04

TIME TO PEAK (hrs)= 3.00 3.08

RUNOFF VOLUME (mm)= 85.90 43.54

TOTAL RAINFALL (mm)= 91.90 91.90

RUNOFF COEFFICIENT = 0.93 0.47

TOTALS

0.236 (iii)

71.07

91.90

0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min

Area (ha)= 2.08

Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 1.35 0.73

Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00

Length (m)= 117.76 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68

1.333 5.51 | 2.833 99.25 | 4.333 7.35 | 5.83 3.68

1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68

1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 100.86

over (min) 5.00 15.00

Storage Coeff. (min)= 2.44 (ii) 11.10 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.30 0.09

PEAK FLOW (cms)= 0.54 0.13

TIME TO PEAK (hrs)= 3.00 3.08

RUNOFF VOLUME (mm)= 85.90 50.50

TOTAL RAINFALL (mm)= 91.90 91.90

RUNOFF COEFFICIENT = 0.93 0.55

TOTALS

0.645 (iii)

3.00

73.51

91.90

0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)

1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0501):	6.23	1.202	3.00	51.49
+ ID2= 2 (5021):	3.67	0.261	3.33	35.40
=====				
ID = 3 (0481):	9.90	1.346	3.00	45.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)

3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	9.90	1.346	3.00	45.53
+ ID2= 2 (5082):	0.71	0.208	3.00	68.30
=====				
ID = 1 (0481):	10.61	1.554	3.00	47.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)

1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	10.61	1.554	3.00	47.05
+ ID2= 2 (5092):	1.73	0.475	3.00	68.19
=====				
ID = 3 (0481):	12.34	2.029	3.00	50.02

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)

3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	12.34	2.029	3.00	50.02
+ ID2= 2 (0510):	0.76	0.273	3.00	78.01
=====				
ID = 1 (0481):	13.10	2.302	3.00	51.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)

1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	13.10	2.302	3.00	51.64
+ ID2= 2 (5282):	2.08	0.645	3.00	73.51
=====				
ID = 3 (0481):	15.18	2.947	3.00	54.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)

3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	15.18	2.947	3.00	54.64
+ ID2= 2 (5682):	0.53	0.152	3.00	66.83
=====				
ID = 1 (0481):	15.71	3.099	3.00	55.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0481):	15.71	3.099	3.00	55.05
+ ID2= 2 (5691):	2.30	0.420	3.00	32.95
=====				
ID = 3 (0481):	18.01	3.519	3.00	52.23

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)

3 + 2 = 1

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0481):	18.01	3.519	3.00	52.23
+ ID2= 2 (5752):	0.78	0.236	3.00	71.07
=====				
ID = 1 (0481):	18.79	3.755	3.00	53.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB

NASHYD (0524)

ID= 1 DT= 5.0 min

U.H. Tp(hrs)= 0.20

Area (ha)= 7.22

Ia (mm)= 8.00

Curve Number (CN)= 80.7

of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68

1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 1.222 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 48.516
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.528

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASHYD (0522)
ID= 1 DT= 5.0 min

Area (ha)= 3.31
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.16

Curve Number (CN)= 63.1
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.373 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 30.116
TOTAL RAINFALL (mm)= 91.900

RUNOFF COEFFICIENT = 0.328

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 1.87		Dir. Conn.(%)= 65.00	
STANDHYD (0580)		Total Imp(%)= 65.00			
ID= 1 DT= 5.0 min					
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.22	0.65		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	111.65	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 52.83
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.36 (ii) 13.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS
PEAK FLOW (cms)= 0.48 0.06 0.533 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00

RUNOFF VOLUME (mm)= 85.90 31.47 66.85
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.34 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 2.08		Dir. Conn.(%)= 65.00	
STANDHYD (0519)		Total Imp(%)= 65.00			
ID= 1 DT= 5.0 min					
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.35	0.73		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	117.76	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 50.65
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.44 (ii) 13.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

TOTALS
PEAK FLOW (cms)= 0.54 0.07 0.590 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 66.41
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		Area (ha)= 1.80		Dir. Conn.(%)= 78.00	
STANDHYD (0529)		Total Imp(%)= 78.00			
ID= 1 DT= 5.0 min					
		IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	1.40	0.40		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	109.54	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68

1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	60.35	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.34 (ii)	6.87 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.30	0.14	
TOTALS			
PEAK FLOW (cms)=	0.56	0.05	0.607 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	
RUNOFF VOLUME (mm)=	85.90	30.24	73.65
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.33	0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0519):	2.08	0.590	3.00	66.41
+ ID2= 2 (0529):	1.80	0.607	3.00	73.65
=====				
ID = 3 (0267):	3.88	1.197	3.00	69.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0267):	3.88	1.197	3.00	69.77
+ ID2= 2 (0580):	1.87	0.533	3.00	66.85
=====				
ID = 1 (0267):	5.75	1.730	3.00	68.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0267):	5.75	1.730	3.00	68.82
+ ID2= 2 (0522):	3.31	0.373	3.00	30.12
=====				
ID = 3 (0265):	9.06	2.103	3.00	54.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0523)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	6.61	
	Total Imp(%)=	75.00	Dir. Conn.(%)=	50.00

	IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	4.96	1.65	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	209.92	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		

1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	185.04	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.45 (ii)	10.24 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.26	0.09	
TOTALS			
PEAK FLOW (cms)=	1.29	0.55	1.766 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	
RUNOFF VOLUME (mm)=	85.90	47.59	66.75
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.52	0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0265):	9.06	2.103	3.00	54.68
+ ID2= 2 (0523):	6.61	1.766	3.00	66.75
=====				
ID = 3 (0260):	15.67	3.869	3.00	59.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0525)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	1.45	
	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	0.94	0.51	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	98.32	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Max.Eff.Inten.(mm/hr)=	143.36	86.21	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.19 (ii)	11.41 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.31	0.09	
TOTALS			
PEAK FLOW (cms)=	0.37	0.07	0.436 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	
RUNOFF VOLUME (mm)=	85.90	43.01	70.88
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.47	0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0272)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0260):	15.67	3.869	3.00	59.77
+ ID2= 2 (0525):	1.45	0.436	3.00	70.88

=====

ID = 3 (0272): 17.12 4.306 3.00 60.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0264)|

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0272):	17.12	4.306	3.00	60.71
+ ID2= 2 (0524):	7.22	1.222	3.00	48.52
=====				
ID = 3 (0264):	24.34	5.446	3.00	57.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB

| STANDHYD (0527)|

|ID= 1 DT= 5.0 min |

	Area (ha)=	1.68
Total Imp(%)=	76.00	Dir. Conn.(%)= 52.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 0.40
Surface Area	1.28	
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	105.83	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68

1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	241.10	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.29 (ii)	8.40 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.30	0.12	
		TOTALS	
PEAK FLOW (cms)=	0.35	0.21	0.552 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	85.90	63.71	75.25
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.69	0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0270)|

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0264):	24.34	5.446	3.00	57.09
+ ID2= 2 (0527):	1.68	0.552	3.00	75.25
=====				
ID = 3 (0270):	26.02	5.998	3.00	58.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB

| STANDHYD (5202)|

|ID= 1 DT= 5.0 min |

	Area (ha)=	2.27
Total Imp(%)=	61.00	Dir. Conn.(%)= 61.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 0.89
Surface Area	1.38	
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	123.02	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	91.35	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.50 (ii)	11.51 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.29	0.09	
		TOTALS	
PEAK FLOW (cms)=	0.55	0.14	0.664 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	
RUNOFF VOLUME (mm)=	85.90	45.60	70.18
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.50	0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0273)|

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

ID1= 1 (0270):	26.02	5.998	3.00	58.27
+ ID2= 2 (5202):	2.27	0.664	3.00	70.18
=====				
ID = 3 (0273):	28.29	6.662	3.00	59.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR (0274)|

| IN= 2--> OUT= 1 |

| DT= 5.0 min |

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1400	0.8343
0.0195	0.2416	0.2360	1.0014
0.0700	0.5564	0.3420	1.6616

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0273)	28.290	6.662	3.00	59.22
OUTFLOW: ID= 1 (0274)	28.290	0.294	5.17	58.99

PEAK FLOW REDUCTION [Qout/Qin](%)=	4.42
TIME SHIFT OF PEAK FLOW (min)=	130.00
MAXIMUM STORAGE USED (ha.m.)=	1.3646

| CALIB

| STANDHYD (0526)|

|ID= 1 DT= 5.0 min |

	Area (ha)=	0.94
Total Imp(%)=	78.00	Dir. Conn.(%)= 78.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 0.21
Surface Area	0.73	
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	79.16	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51

0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 91.63
over (min) 5.00 10.00
Storage Coeff. (min)= 1.92 (ii) 6.46 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14

TOTALS
PEAK FLOW (cms)= 0.29 0.04 0.333 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 45.74 77.06
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.50 0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279) IN= 2----> OUT= 1 DT= 5.0 min					OVERFLOW IS OFF			
		OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)			
		0.0000	0.0000	0.0476	0.0432			
		0.0096	0.0220	0.0579	0.0480			
		0.0206	0.0306	0.0671	0.0528			
		0.0297	0.0360	0.0000	0.0000			

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
0.940	0.333	3.00	77.06
0.940	0.054	3.33	76.45

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.15

TIME SHIFT OF PEAK FLOW (min)= 20.00
MAXIMUM STORAGE USED (ha.m.)= 0.0461

CALIB STANDHYD (0574) ID= 1 DT= 5.0 min				Area (ha)= 1.44	Dir. Conn.(%)= 78.00
				Total Imp(%)= 78.00	
				IMPERVIOUS (i)	PERVIOUS (i)
				Surface Area (ha)= 1.12	0.32
				Dep. Storage (mm)= 6.00	8.00
				Average Slope (%)= 1.00	1.00
				Length (m)= 97.98	40.00
				Mannings n = 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 76.27
over (min) 5.00 10.00
Storage Coeff. (min)= 2.19 (ii) 6.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.31 0.14

TOTALS
PEAK FLOW (cms)= 0.45 0.05 0.497 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 38.06 75.37

TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.41 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276) IN= 2----> OUT= 1 DT= 5.0 min					OVERFLOW IS OFF			
		OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)			
		0.0000	0.0000	0.0730	0.0642			
		0.0150	0.0327	0.0890	0.0712			
		0.0310	0.0455	0.1030	0.0784			
		0.0450	0.0536	0.0000	0.0000			

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1.440	0.497	3.00	75.37
1.440	0.083	3.25	74.99

PEAK FLOW REDUCTION [Qout/Qin](%)= 16.71
TIME SHIFT OF PEAK FLOW (min)= 15.00
MAXIMUM STORAGE USED (ha.m.)= 0.0686

Surface Area (ha)= 13.32 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 128.60
over (min) 5.00 15.00
Storage Coeff. (min)= 4.78 (ii) 12.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

TOTALS
PEAK FLOW (cms)= 3.73 1.32 4.841 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 41.88 63.89
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (0571) ID= 1 DT= 5.0 min					Area (ha)= 19.59	Dir. Conn.(%)= 50.00
					Total Imp(%)= 68.00	
					IMPERVIOUS	PERVIOUS (i)

CALIB
STANDHYD (0572)
ID= 1 DT= 5.0 min

Area (ha)= 11.31
Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 189.63
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.05 (ii) 10.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.09

TOTALS
PEAK FLOW (cms)= 2.19 1.12 3.167 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 56.97 71.44
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.62 0.78

0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 83.26
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.63 (ii) 11.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS
PEAK FLOW (cms)= 0.63 0.15 0.754 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 41.53 68.15
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.45 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0285)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0282):	30.90	8.009	3.00	66.65
+ ID2= 2 (0573):	2.66	0.754	3.00	68.15
=====				
ID = 3 (0285):	33.56	8.763	3.00	66.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0280)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.2300	1.1312
0.0230	0.3704	0.2810	1.3850
0.0900	0.8066	0.4120	2.2335

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0282)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0571):	19.59	4.841	3.00	63.89
+ ID2= 2 (0572):	11.31	3.167	3.00	71.44
=====				
ID = 3 (0282):	30.90	8.009	3.00	66.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0573)
ID= 1 DT= 5.0 min

Area (ha)= 2.66
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.60 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0285) 33.560 8.763 3.00 66.77
OUTFLOW: ID= 1 (0280) 33.560 0.354 5.17 66.06

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.04
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 1.8591

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0274):	28.29	0.294	5.17	58.99
+ ID2= 2 (0275):	2.38	0.137	3.25	75.57
=====				
ID = 3 (0102):	30.67	0.405	3.58	60.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	30.67	0.405	3.58	60.28
+ ID2= 2 (0280):	33.56	0.354	5.17	66.06
=====				
ID = 1 (0102):	64.23	0.735	3.83	63.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0102):	64.23	0.735	3.83	63.30
+ ID2= 2 (0481):	18.79	3.755	3.00	53.01
=====				
ID = 3 (0102):	83.02	4.141	3.00	60.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)

3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0102):	83.02	4.141	3.00	60.97
+ ID2= 2 (0502):	117.52	4.275	3.92	37.24
ID = 1 (0102):	200.54	6.511	3.00	47.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	Routing time step (min)'= 5.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 /0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 /0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37

1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	124.37	
over (min)	5.00	10.00	
Storage Coeff. (min)=	4.30 (ii)	9.29 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.12	
PEAK FLOW (cms)=	3.56	0.80	4.361 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	
RUNOFF VOLUME (mm)=	85.90	45.87	72.69
TOTAL RAINFALL (mm)=	91.90	91.90	
RUNOFF COEFFICIENT =	0.93	0.50	0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0503):	200.54	5.797	3.00	47.07
+ ID2= 2 (5032):	13.80	4.361	3.00	72.69
ID = 3 (0104):	214.34	9.810	3.00	48.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)	Routing time step (min)'= 5.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (815.4) ----->		
Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900

2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	200.54	6.51	3.00	47.07	1.34
OUTFLOW: ID= 1 (0503)	200.54	5.80	3.08	47.07	1.27

CALIB	Area (ha)= 13.80
STANDHYD (5032)	Total Imp(%)= 76.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)= 67.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	10.49	3.31		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	303.32	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68

|ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.77 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 119.56
over (min) 5.00 15.00
Storage Coeff. (min)= 3.61 (ii) 11.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09
TOTALS
PEAK FLOW (cms)= 1.95 0.39 2.281 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 43.30 70.99
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.47 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0106) |
| 1 + 2 = 3 |

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0504): 214.34 6.947 3.17 48.71
+ ID2= 2 (5042): 7.70 2.281 3.00 70.99
=====

ID = 3 (0106): 222.04 8.125 3.00 49.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (5212) |
|ID= 1 DT= 5.0 min |

Area (ha)= 15.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.78 3.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68

1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 139.26
over (min) 5.00 15.00
Storage Coeff. (min)= 4.47 (ii) 12.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09
TOTALS
PEAK FLOW (cms)= 3.97 0.93 4.774 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 52.18 74.43
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.57 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0114) |
| 1 + 2 = 3 |

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 222.04 8.125 3.00 49.49
+ ID2= 2 (5212): 15.70 4.774 3.00 74.43
=====

ID = 3 (0114): 237.74 12.899 3.00 51.13

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0505) |
| IN= 2----> OUT= 1 |

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100
69.13 79.02 0.1100
92.42 79.04 0.1100

98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 / 0.0700 Main Channel
336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 / 0.0900 Main Channel
394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70
0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74
1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

<---- hydrograph ----> <-pipe / channel->

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.74 12.90 3.00 51.13 0.85 0.58
OUTFLOW : ID= 1 (0505) 237.74 11.54 3.08 51.13 0.80 0.56

| CALIB
| STANDHYD (5052) |
|ID= 1 DT= 5.0 min |

Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

Surface Area (ha)= IMPERVIOUS 11.77 PERVIOUS (i) 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 112.47
over (min) 5.00 15.00
Storage Coeff. (min)= 4.49 (ii) 12.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08
PEAK FLOW (cms)= 3.96 0.76
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 42.28
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46
TOTALS
4.597 (iii)
3.00
70.63
91.90
0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0108) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0505): 237.74 11.541 3.08 51.13
+ ID2= 2 (5052): 15.90 4.597 3.00 70.63
=====

ID = 3 (0108): 253.64 15.789 3.00 52.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0506) |
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900
45.97	80.05	0.0900
65.23	79.93	0.0900
84.49	80.35	0.0900
113.49	80.02	0.0900
136.48	80.07	0.0900
188.81	79.81	0.0900
197.86	79.25	0.0900 / 0.0700
200.70	78.22	0.0700
203.29	79.35	0.0700 / 0.0900
204.01	79.67	0.0900
236.47	80.40	0.0900
277.80	80.48	0.0900
305.35	80.37	0.0900
346.67	80.41	0.0900
387.99	80.33	0.0900
415.54	80.53	0.0900
447.88	80.49	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54

0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ----> <-pipe / channel->
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm) MAX DEPTH (m) MAX VEL (m/s)
INFLOW : ID= 2 (0108) 253.64 15.79 3.00 52.36 1.77 0.90
OUTFLOW: ID= 1 (0506) 253.64 13.46 3.08 52.35 1.70 1.00

| CALIB |
| STANDHYD (5062) | Area (ha)= 11.70
| ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

Surface Area (ha)= IMPERVIOUS 8.78 PERVIOUS (i) 2.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 279.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68

| ADD HYD (0110) |
| 1 + 2 = 3 | AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0506): 253.64 13.459 3.08 52.35
+ ID2= 2 (5062): 11.70 3.475 3.00 72.05
=====

ID = 3 (0110): 265.34 15.614 3.00 53.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (5102) | Area (ha)= 1.70
| ID= 1 DT= 5.0 min | Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 105.71
over (min) 5.00 15.00
Storage Coeff. (min)= 2.30 (ii) 10.79 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.35 0.11 0.445 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 40.09 63.91
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.44 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (553.6) -----
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100 /0.0700 Main Channel
69.13 79.02 0.0700 Main Channel
92.42 79.04 0.0700 Main Channel
98.70 80.89 0.0700 /0.1100 Main Channel
128.88 81.13 0.1100
199.00 81.23 0.1100

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .361E+03 0.6 0.24 9.91
0.23 79.25 .776E+03 2.1 0.40 6.09
0.35 79.37 .121E+04 4.3 0.52 4.65
0.47 79.48 .165E+04 7.1 0.63 3.85
0.59 79.60 .211E+04 10.5 0.72 3.34
0.70 79.72 .258E+04 14.4 0.81 2.98
0.82 79.84 .307E+04 18.8 0.89 2.71
0.94 79.95 .357E+04 23.8 0.97 2.50
1.05 80.07 .408E+04 29.2 1.04 2.33
1.17 80.19 .461E+04 35.1 1.10 2.19
1.29 80.30 .515E+04 41.5 1.17 2.07
1.41 80.42 .571E+04 48.4 1.23 1.97
1.52 80.54 .631E+04 55.8 1.28 1.88
1.64 80.66 .695E+04 63.8 1.33 1.81
1.76 80.77 .762E+04 72.3 1.38 1.76
1.87 80.89 .833E+04 81.4 1.42 1.71
2.00 81.02 .931E+04 92.4 1.44 1.68
2.13 81.14 .109E+05 104.8 1.39 1.74
2.25 81.27 .140E+05 120.9 1.25 1.93

----- hydrograph ----- <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5102) 1.70 0.45 3.00 63.91 0.09 0.24
OUTFLOW: ID= 1 (0511) 1.70 0.32 3.00 63.89 0.06 0.24

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min
Area (ha)= 3.00
Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 121.62
over (min) 5.00 15.00
Storage Coeff. (min)= 2.72 (ii) 10.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS
PEAK FLOW (cms)= 0.69 0.20 0.856 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 45.49 68.93
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)
1 + 2 = 3
AREA OPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0511): 1.70 0.322 3.00 63.89
+ ID2= 2 (5112): 3.00 0.856 3.00 68.93
=====

ID = 3 (0117): 4.70 1.179 3.00 67.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (484.2) -----
Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 /0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 /0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71
0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71
0.79 80.51 .934E+03 0.9 0.46 16.84
0.93 80.64 .245E+04 1.6 0.31 24.96
1.06 80.77 .873E+04 4.6 0.25 31.51

1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

		<---- hydrograph ---->			<-pipe / channel->	
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
		(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0117)		4.70	1.18	3.00	67.11	0.84
OUTFLOW: ID= 1 (0512)		4.70	0.73	3.08	67.04	0.44

CALIB			
STANDHYD (5122)	Area (ha)=	3.90	
ID= 1 DT= 5.0 min	Total Imp(%)=	68.00	Dir. Conn.(%)= 57.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.65	1.25
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	161.25	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6011)	Area (ha)=	44.10	Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.83	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)=	1.596 (i)
TIME TO PEAK (hrs)=	3.833
RUNOFF VOLUME (mm)=	29.382
TOTAL RAINFALL (mm)=	91.900
RUNOFF COEFFICIENT	= 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (6012)	Area (ha)=	11.00	
ID= 1 DT= 5.0 min	Total Imp(%)=	28.00	Dir. Conn.(%)= 16.00

1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	120.11
over (min)	5.00	15.00
Storage Coeff. (min)=	2.95 (ii)	11.02 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.28	0.09

TOTALS

PEAK FLOW (cms)=	0.88	0.26	1.097 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	45.28	68.43
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT	= 0.93	0.49	0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.726	3.08	67.04
+ ID2= 2 (5122):	3.90	1.097	3.00	68.43
=====				
ID = 3 (0119):	8.60	1.756	3.00	67.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.34	15.614	3.00	53.22
+ ID2= 2 (0119):	8.60	1.756	3.00	67.67
=====				
ID = 3 (0120):	273.94	17.370	3.00	53.68

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.80	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	76.68
over (min)	5.00	15.00
Storage Coeff. (min)=	4.02 (ii)	13.68 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.08

TOTALS

PEAK FLOW (cms)=	0.68	0.94	1.451 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	33.10	41.55
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT	= 0.93	0.36	0.45

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1	2	3		
ID1= 1 (6011):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6012):	44.10	1.596	3.83	29.38
	11.00	1.451	3.00	41.55
=====				
ID = 3 (0124):	55.10	1.931	3.50	31.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6021)	Area (ha)=	43.60	Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)= 3.00
	U.H. Tp(hrs)=	0.95	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51	0.167	3.68	1.667	9.19
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51	0.250	3.68	1.750	9.19
0.333	3.68	1.833	9.19	3.333	20.22	4.75	5.51	0.417	3.68	1.917	9.19
0.500	3.68	2.000	9.19	3.500	20.22	4.83	5.51	0.583	3.68	2.083	11.03
0.667	3.68	2.167	11.03	3.667	9.19	4.92	5.51	0.750	3.68	2.250	11.03
0.833	3.68	2.333	11.03	3.833	9.19	5.00	5.51	0.917	3.68	2.417	11.03
1.000	3.68	2.500	11.03	4.000	9.19	5.08	3.68	1.083	3.68	2.583	11.03
1.167	3.68	2.667	11.03	4.167	7.35	5.17	3.68	1.250	3.68	2.750	99.25
1.333	3.68	2.833	99.25	4.333	7.35	5.25	3.68	1.417	3.68	2.917	143.36
1.500	3.68	3.000	143.36	4.500	7.35	5.33	3.68	1.667	3.68	3.167	99.25
						5.42	3.68	1.833	3.68	3.333	99.25
						5.50	3.68	2.000	3.68	3.500	20.22
						5.58	3.68	2.167	3.68	3.667	9.19
						5.67	3.68	2.333	3.68	3.833	9.19
						5.75	3.68	2.500	3.68	4.000	9.19
						5.83	3.68	2.667	3.68	4.167	7.35
						5.92	3.68	2.833	3.68	4.333	7.35
						6.00	3.68	3.000	3.68	4.500	7.35

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.426 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 29.382
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB		
STANDHYD (6022)		
ID= 1 DT= 5.0 min	Area (ha)= 12.90	Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS		
PERVIOUS (i)		
Surface Area (ha)=	4.51	8.38
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	293.26	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----											
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51	0.167	3.68	1.667	9.19
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51	0.333	3.68	1.833	9.19
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51	0.500	3.68	2.000	9.19
0.583	3.68	2.083	11.03	3.583	9.19	5.08	3.68	0.667	3.68	2.167	11.03
0.750	3.68	2.250	11.03	3.750	9.19	5.17	3.68	0.833	3.68	2.333	11.03
0.917	3.68	2.417	11.03	3.917	9.19	5.25	3.68	1.000	3.68	2.500	11.03
1.083	3.68	2.583	11.03	4.083	9.19	5.33	3.68	1.167	3.68	2.667	11.03
1.250	3.68	2.750	99.25	4.250	7.35	5.42	3.68	1.333	3.68	2.833	99.25
1.417	3.68	2.917	143.36	4.417	7.35	5.50	3.68	1.500	3.68	3.000	143.36

Max.Eff.Inten.(mm/hr)= 143.36 78.70
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.22 (ii) 13.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.24 0.08
PEAK FLOW (cms)= 1.14 1.02
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 33.48
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.36
TOTALS
1.979 (iii)
3.00
45.53
91.90
0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)				
1	2	3		
ID1= 1 (6021):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (6022):	43.60	1.426	4.00	29.38
	12.90	1.979	3.00	45.53
=====				
ID = 3 (0125):	56.50	2.259	3.00	33.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1	2	3		
ID1= 1 (0124):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
+ ID2= 2 (0125):	55.10	1.931	3.50	31.81
	56.50	2.259	3.00	33.07
=====				
ID = 3 (0126):	111.60	4.090	3.00	32.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)				
IN= 2----> OUT= 1				
Routing time step (min)'= 5.00				

<----- DATA FOR SECTION (2135.9) ----->		
Distance	Elevation	Manning
0.00	92.58	0.1400
8.54	92.59	0.1400
22.11	92.47	0.1400

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ---->				<-pipe / channel-->		
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	4.09	3.00	32.45	0.69	0.24
OUTFLOW: ID= 1 (0603)	111.60	2.68	4.50	32.44	0.62	0.22

CALIB
NASHYD (0613)
ID= 1 DT= 5.0 min

Area (ha)= 1.77 Curve Number (CN)= 66.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.22

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.182 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 32.738
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.356

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6222)
ID= 1 DT= 5.0 min

Area (ha)= 2.02
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.58 0.44
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 116.05 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 72.85
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.42 (ii) 6.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

TOTALS
PEAK FLOW (cms)= 0.62 0.07 0.692 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 36.38 75.00
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0614)
ID= 1 DT= 5.0 min

Area (ha)= 1.50
Total Imp(%)= 69.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.04 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 100.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 133.49
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.21 (ii) 9.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.11
TOTALS
PEAK FLOW (cms)= 0.30 0.12 0.414 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 42.17 64.03
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.46 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0615)
ID= 1 DT= 5.0 min

Area (ha)= 2.14
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.67 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 119.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 72.85
over (min)= 5.00 10.00
Storage Coeff. (min)= 2.46 (ii) 7.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.14

PEAK FLOW (cms)= 0.66 0.07 0.733 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 36.38 75.00
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.40 0.82

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0618)
ID= 1 DT= 5.0 min
Area (ha)= 1.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.16 0.33
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 99.67 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68

1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 222.82
over (min) 5.00 10.00
Storage Coeff. (min)= 2.21 (ii) 8.51 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.12

PEAK FLOW (cms)= 0.30 0.15 0.445 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 50.76 68.32
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.55 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302)
ID= 1 DT= 5.0 min
Area (ha)= 0.86
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.81 0.05
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.72 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68

0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 60.35
over (min) 5.00 5.00
Storage Coeff. (min)= 1.87 (ii) 4.37 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.32 0.23

PEAK FLOW (cms)= 0.32 0.01 0.330 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 82.56
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0617)
ID= 1 DT= 5.0 min
Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr

Max.Eff.Inten.(mm/hr)= 143.36 248.28
over (min) 5.00 10.00
Storage Coeff. (min)= 2.52 (ii) 8.56 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.12

PEAK FLOW (cms)= 0.46 0.26 0.718 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 57.07 71.48
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.62 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0290)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0614): 1.50 0.414 3.00 64.03
+ ID2= 2 (0615): 2.14 0.733 3.00 75.00
ID = 3 (0290): 3.64 1.148 3.00 70.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0290):	3.64	1.148	3.00	70.48
+ ID2= 2 (0617):	2.31	0.718	3.00	71.48
=====				
ID = 1 (0290):	5.95	1.866	3.00	70.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0290):	5.95	1.866	3.00	70.87
+ ID2= 2 (0618):	1.49	0.445	3.00	68.32
=====				
ID = 3 (0290):	7.44	2.311	3.00	70.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0290):	7.44	2.311	3.00	70.36
+ ID2= 2 (6222):	2.02	0.692	3.00	75.00
=====				
ID = 1 (0290):	9.46	3.003	3.00	71.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0290):	9.46	3.003	3.00	71.35
+ ID2= 2 (6302):	0.86	0.330	3.00	82.56
=====				
ID = 3 (0290):	10.32	3.333	3.00	72.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6232)				
ID= 1 DT= 5.0 min				
	Area (ha)	Imp(%)	Dir. Conn.(%)	
	0.85	65.00	65.00	

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.55	0.30
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	75.28	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Max.Eff.Inten.(mm/hr)=	143.36	50.65
over (min)	5.00	15.00
Storage Coeff. (min)=	1.87 (ii)	13.27 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.32	0.08

CALIB				
STANDHYD (6212)				
ID= 1 DT= 5.0 min				
	Area (ha)	Imp(%)	Dir. Conn.(%)	
	1.15	65.00	65.00	

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.75	0.40
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	87.56	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Max.Eff.Inten.(mm/hr)=	143.36	50.65
over (min)	5.00	15.00
Storage Coeff. (min)=	2.04 (ii)	13.45 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.31	0.08
TOTALS		
PEAK FLOW (cms)=	0.30	0.04
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	30.24
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.33
		0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

TOTALS		
PEAK FLOW (cms)=	0.22	0.03
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	30.24
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.33
		0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)

ID1= 1 (6212):	1.15	0.327	3.00	66.41
+ ID2= 2 (6232):	0.85	0.242	3.00	66.41
=====				
ID = 3 (0288):	2.00	0.570	3.00	66.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (0626)				
ID= 1 DT= 5.0 min				
	Area (ha)	Imp(%)	Dir. Conn.(%)	
	0.96	60.00	60.00	

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	0.58	0.38
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	80.00	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		

0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.97
over (min) 5.00 15.00
Storage Coeff. (min)= 1.93 (ii) 10.88 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.31 0.09

TOTALS
PEAK FLOW (cms)= 0.23 0.06 0.282 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 46.42 70.10
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)					
1 + 2 = 3					

ID1= 1 (0288):	2.00	0.570	3.00	66.41	
+ ID2= 2 (0290):	10.32	3.333	3.00	72.29	
=====					
ID = 3 (0297):	12.32	3.903	3.00	71.33	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)

ID1= 3 (0297):		12.32	3.903	3.00	71.33
+ ID2= 2 (0613):		1.77	0.182	3.08	32.74
=====					
ID = 1 (0297):		14.09	4.060	3.00	66.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0297):		14.09	4.060	3.00	66.48
+ ID2= 2 (0626):		0.96	0.282	3.00	70.10
=====					
ID = 3 (0297):		15.05	4.341	3.00	66.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0302)							
IN= 2----> OUT= 1							
DT= 5.0 min							

				OVERFLOW IS OFF			
		OUTFLOW	STORAGE			OUTFLOW	STORAGE
		(cms)	(ha.m.)			(cms)	(ha.m.)
		0.0000	0.0000			0.1070	0.3146
		0.0150	0.1715			0.7100	0.8031

		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (0297)		15.050	4.341	3.00	66.71	
OUTFLOW: ID= 1 (0302)		15.050	0.551	3.58	66.52	

PEAK FLOW REDUCTION [Qout/Qin](%)= 12.70
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.6752

CALIB							
STANDHYD (6202)							
ID= 1 DT= 5.0 min							

		Area	(ha)=	1.26			
		Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00		

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	1.18	0.08		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	91.65	40.00		

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 60.35
over (min) 5.00 5.00
Storage Coeff. (min)= 2.10 (ii) 4.60 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.31 0.23

TOTALS
PEAK FLOW (cms)= 0.47 0.01 0.483 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 82.56
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| RESERVOIR(0292)| OVERFLOW IS OFF

IN= 2----> OUT= 1							
DT= 5.0 min							

				OVERFLOW IS OFF			
		OUTFLOW	STORAGE			OUTFLOW	STORAGE
		(cms)	(ha.m.)			(cms)	(ha.m.)
		0.0000	0.0000			0.0580	0.0848
		0.0090	0.0366			0.0000	0.0000

		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (6202)		1.260	0.483	3.00	82.56	
OUTFLOW: ID= 1 (0292)		1.260	0.047	3.58	81.74	

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.81
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0745

CALIB							
STANDHYD (0606)							
ID= 1 DT= 5.0 min							

		Area	(ha)=	1.98			
		Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00		

		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	1.29	0.69		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	114.89	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68

1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68
1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 50.65
over (min) 5.00 15.00
Storage Coeff. (min)= 2.40 (ii) 13.81 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.08

PEAK FLOW (cms)= 0.51 0.06 0.562 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 66.41
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0612) | Area (ha)= 2.18
ID= 1 DT= 5.0 min | Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.05 0.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 120.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68

0.750 5.51 | 2.250 11.03 | 3.750 9.19 | 5.25 3.68
0.833 5.51 | 2.333 11.03 | 3.833 9.19 | 5.33 3.68
0.917 5.51 | 2.417 11.03 | 3.917 9.19 | 5.42 3.68
1.000 5.51 | 2.500 11.03 | 4.000 9.19 | 5.50 3.68
1.083 5.51 | 2.583 55.14 | 4.083 7.35 | 5.58 3.68
1.167 5.51 | 2.667 55.14 | 4.167 7.35 | 5.67 3.68
1.250 5.51 | 2.750 99.25 | 4.250 7.35 | 5.75 3.68
1.333 5.51 | 2.833 99.25 | 4.333 7.35 | 5.83 3.68
1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68
1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 60.35
over (min) 5.00 5.00
Storage Coeff. (min)= 2.47 (ii) 4.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 5.00
Unit Hyd. peak (cms)= 0.29 0.22

PEAK FLOW (cms)= 0.81 0.02 0.833 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 30.24 82.56
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.33 0.90

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0295) | OVERFLOW IS OFF
IN= 2----> OUT= 1
DT= 5.0 min |

OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0612) 2.180 0.833 3.00 82.56
OUTFLOW: ID= 1 (0295) 2.180 0.082 3.58 82.10

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.84
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.1288

ADD HYD (0306) |
1 + 2 = 3 |

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0292):	1.26	0.047	3.58 81.74
+ ID2= 2 (0295):	2.18	0.082	3.58 82.10
ID = 3 (0306):	3.44	0.129	3.58 81.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306) |
3 + 2 = 1 |

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0306):	3.44	0.129	3.58 81.97
+ ID2= 2 (0606):	1.98	0.562	3.00 66.41
ID = 1 (0306):	5.42	0.656	3.00 76.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304) |
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) -----

Distance	Elevation	Manning
0.00	92.50	0.0700
36.57	92.00	0.0700
90.03	91.00	0.0700
124.58	90.00	0.0700 / 0.0350 Main Channel
128.34	89.59	0.0350 Main Channel
129.84	89.59	0.0350 Main Channel
132.39	90.00	0.0350 / 0.0700 Main Channel
163.76	91.00	0.0700
187.47	91.00	0.0700
203.83	91.00	0.0700
306.44	92.00	0.0700

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36

0.68 90.27 .581E+04 7.3 1.15 13.32
0.81 90.40 .945E+04 11.9 1.15 13.29
0.94 90.53 .142E+05 18.0 1.17 13.10
1.08 90.67 .200E+05 26.0 1.19 12.79
1.21 90.80 .268E+05 36.0 1.23 12.42
1.34 90.93 .348E+05 48.2 1.27 12.03
1.48 91.07 .464E+05 58.3 1.15 13.27
1.61 91.20 .629E+05 78.8 1.15 13.30
1.74 91.33 .819E+05 104.3 1.17 13.08
1.88 91.47 .103E+06 135.3 1.20 12.74
2.01 91.60 .128E+06 172.1 1.24 12.35
2.14 91.73 .154E+06 215.1 1.28 11.94
2.28 91.87 .183E+06 264.7 1.32 11.54
2.41 92.00 .215E+06 321.3 1.37 11.15

hydrograph <----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0306) 5.42 0.66 3.00 76.29 0.25 0.73
OUTFLOW: ID= 1 (0304) 5.42 0.34 3.08 76.28 0.18 0.60

CALIB
STANDHYD (0616) | Area (ha)= 0.44
ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68

0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.97
over (min) 5.00 10.00
Storage Coeff. (min)= 1.53 (ii) 6.07 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.33 0.15

TOTALS
PEAK FLOW (cms)= 0.14 0.02 0.157 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 46.42 77.21
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min
Area (ha)= 2.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.94	0.55
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	128.84	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 92.97
over (min) 5.00 10.00
Storage Coeff. (min)= 1.89 (ii) 6.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.32 0.14

TOTALS
PEAK FLOW (cms)= 0.28 0.04 0.316 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 46.42 77.21
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 282.45
over (min) 5.00 10.00
Storage Coeff. (min)= 2.58 (ii) 8.31 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.29 0.13

TOTALS
PEAK FLOW (cms)= 0.49 0.33 0.824 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 66.47 76.18
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.72 0.83

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0624)
ID= 1 DT= 5.0 min
Area (ha)= 0.89
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.69	0.20
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	77.03	40.00

ADD HYD (0286)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6102): 2.49 0.824 3.00 76.18
+ ID2= 2 (0616): 0.44 0.157 3.00 77.21
===== ID = 3 (0286): 2.93 0.980 3.00 76.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0286)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0286): 2.93 0.980 3.00 76.34
+ ID2= 2 (0624): 0.89 0.316 3.00 77.21
===== ID = 1 (0286): 3.82 1.296 3.00 76.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0305)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.1760 0.2330
0.0280 0.0927 0.0000 0.0000
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0286): 3.820 1.296 3.00 76.54
OUTFLOW: ID= 1 (0305): 3.820 0.143 3.58 76.32

PEAK FLOW REDUCTION [Qout/Qin](%)= 11.04
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.2019

CALIB
STANDHYD (0619)
ID= 1 DT= 5.0 min
Area (ha)= 1.64
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.07	0.57
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	104.56	40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 103.33
over (min) 5.00 15.00
Storage Coeff. (min)= 2.27 (ii) 10.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.42 0.10 0.513 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 51.79 73.96
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.56 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0293)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0302): 15.05 0.551 3.58 66.52
+ ID2= 2 (0304): 5.42 0.343 3.08 76.28
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0293)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0293): 20.47 0.810 3.50 69.10
+ ID2= 2 (0305): 3.82 0.143 3.58 76.32
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0293)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0293): 24.29 0.952 3.50 70.24
+ ID2= 2 (0619): 1.64 0.513 3.00 73.96
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (6032)| Area (ha)= 29.63
|ID= 1 DT= 5.0 min| Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 13.93 15.70
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.45 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 114.52
over (min) 5.00 15.00
Storage Coeff. (min)= 5.41 (ii) 13.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS
PEAK FLOW (cms)= 3.56 2.86 5.963 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 90.40 45.12 59.61
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.98 0.49 0.65

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0128)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0293): 25.93 1.268 3.00 70.47
+ ID2= 2 (0603): 111.60 2.684 4.50 32.44
=====

ID = 3 (0128): 137.53 3.499 4.42 39.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0128)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0128): 137.53 3.499 4.42 39.61
+ ID2= 2 (0632): 29.63 5.963 3.00 59.61
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0604)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->
Distance Elevation Manning
0.00 86.75 0.0900
3.09 87.40 0.0900
18.33 87.41 0.0900
35.33 86.99 0.0900
73.84 86.75 0.0900
103.33 86.41 0.0900
120.33 86.11 0.0900
129.46 86.13 0.0900
143.37 85.32 0.0900
154.33 85.02 0.0900
161.57 85.09 0.0900
163.05 84.78 0.0900 /0.0700 Main Channel
166.55 83.78 0.0700 Main Channel
168.05 84.78 0.0700 /0.1100 Main Channel
172.02 85.29 0.1100
191.39 86.19 0.1100
270.18 85.78 0.1100
296.33 86.36 0.1100
324.34 86.68 0.1100
368.56 87.05 0.1100

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.17 83.95 .465E+02 0.0 0.03 432.88
0.33 84.11 .186E+03 0.0 0.04 272.70
0.50 84.28 .418E+03 0.0 0.05 208.11
0.67 84.45 .743E+03 0.1 0.06 171.79
0.83 84.61 .116E+04 0.1 0.08 148.04

1.00	84.78	.167E+04	0.2	0.09	131.10		
1.20	84.98	.252E+04	0.4	0.10	110.62		
1.41	85.19	.469E+04	0.6	0.09	121.59		
1.61	85.39	.842E+04	1.1	0.09	126.63		
1.81	85.59	.133E+05	1.8	0.09	121.99		
2.01	85.79	.192E+05	2.7	0.10	116.68		
2.22	86.00	.298E+05	4.0	0.09	125.45		
2.42	86.20	.487E+05	5.6	0.08	143.80		
2.62	86.40	.736E+05	9.0	0.08	137.02		
2.82	86.60	.102E+06	13.1	0.09	130.82		
3.03	86.81	.136E+06	18.1	0.09	125.42		
3.23	87.01	.178E+06	24.4	0.09	121.07		
3.43	87.21	.224E+06	34.2	0.10	108.80		
3.63	87.41	.271E+06	44.8	0.11	100.89		

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)		167.16	7.96	3.00	43.16	2.56	0.08
OUTFLOW: ID= 1 (0604)		167.16	3.29	4.50	43.15	2.15	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB				
STANDHYD (6042)	Area (ha)=	24.00		
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00	Dir. Conn.(%)=	69.00

		IMPERVIOUS (ha)=	PERVIOUS (i)
Surface Area	(ha)=	18.72	5.28
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	400.00	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68

0.00	82.95	0.1100		
3.78	82.95	0.1100		
9.24	82.49	0.1100		
50.67	82.10	0.1100		
105.12	82.17	0.1100		
119.34	81.56	0.1100		
150.67	81.66	0.1100		
157.23	82.37	0.1100		
190.03	82.57	0.1100		
223.75	82.27	0.1100		
252.32	82.50	0.1100		
254.65	81.95	0.1100 / 0.0700	Main Channel	
258.15	80.95	0.0700	Main Channel	
259.65	81.95	0.0700 / 0.1100	Main Channel	
263.15	82.90	0.1100		
278.14	82.80	0.1100		
282.35	81.68	0.1100		
285.02	82.19	0.1100		
336.56	82.53	0.1100		
404.40	82.68	0.1100		

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

		AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0130)		191.16	10.24	3.00	47.33	1.24	0.31
OUTFLOW: ID= 1 (0605)		191.16	4.69	3.17	47.33	0.98	0.32

0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	152.35	
over (min)	5.00	10.00	
Storage Coeff. (min)=	5.08 (ii)	9.84 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.21	0.11	
PEAK FLOW (cms)=	6.27	1.57	7.836 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	85.90	55.42	76.45
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.60	0.83

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)				
1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0604):	167.16	3.290	4.50	43.15
+ ID2= 2 (6042):	24.00	7.836	3.00	76.45
ID = 3 (0130):	191.16	10.241	3.00	47.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)			
IN= 2--> OUT= 1	Routing time step (min)=	5.00	

Distance	Elevation	Manning

CALIB				
STANDHYD (6112)	Area (ha)=	11.40		
ID= 1 DT= 5.0 min	Total Imp(%)=	72.00	Dir. Conn.(%)=	62.00

		IMPERVIOUS (ha)=	PERVIOUS (i)
Surface Area	(ha)=	8.21	3.19
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	275.68	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	133.09	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.06 (ii)	11.81 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.24	0.09	
PEAK FLOW (cms)=	2.73	0.73	3.355 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	49.85	72.20
TOTAL RAINFALL (mm)=	91.90	91.90	91.90

RUNOFF COEFFICIENT = 0.93 0.54 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0605):	191.16	4.692	3.17	47.33
+ ID2= 2 (6112):	11.40	3.355	3.00	72.20
=====				
ID = 3 (0139):	202.56	6.808	3.00	48.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min

Area (ha)=	15.90
Total Imp(%)=	74.00
Dir. Conn.(%)=	65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	11.77	4.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	325.58	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68

0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 107.34
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.49 (ii) 12.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 3.96 0.72 4.560 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 40.34 69.95
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.44 0.76

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0139):	202.56	6.808	3.00	48.73
+ ID2= 2 (6052):	15.90	4.560	3.00	69.95
=====				
ID = 3 (0132):	218.46	11.368	3.00	50.28

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) ----->

Distance	Elevation	Manning
0.00	81.70	0.1100

3.84	81.72	0.1100
5.87	80.72	0.1100
9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100
85.61	81.14	0.1100
93.32	80.00	0.1100
95.04	80.45	0.1100
102.72	80.66	0.1100
110.13	78.93	0.1100 / 0.0700
118.05	78.63	0.0700
124.40	78.89	0.0700 / 0.1100
132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ---->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0132)	218.46	11.37	3.00	50.28	0.87	0.76
OUTFLOW: ID= 1 (0530)	218.46	8.99	3.08	50.28	0.79	0.74

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

Area (ha)=	5.80
Total Imp(%)=	66.00
Dir. Conn.(%)=	56.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	3.83	1.97
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 100.77
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.32 (ii) 11.98 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.09

PEAK FLOW (cms)= 1.27 0.33 1.549 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 39.33 65.41
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.43 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0530):	218.46	8.994	3.08	50.28
+ ID2= 2 (5302):	5.80	1.549	3.00	65.41
=====				
ID = 3 (0134):	224.26	9.858	3.00	50.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0120):	273.94	17.370	3.00	53.68
+ ID2= 2 (0134):	224.26	9.858	3.00	50.67
=====				
ID = 3 (0135):	498.20	27.228	3.00	52.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	
IN= 2----> OUT= 1	

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning
0.00	79.36	0.0900
7.45	79.32	0.0900
13.77	79.27	0.0900
20.24	79.24	0.0900
27.28	79.26	0.0900
34.16	79.13	0.0900
40.79	79.05	0.0900
47.58	79.05	0.0900
54.30	79.07	0.0900
60.87	79.24	0.0900

Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	570.96	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	119.44
over (min)	5.00	15.00
Storage Coeff. (min)=	6.29 (ii)	14.38 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.19	0.08

PEAK FLOW (cms)=	6.46	4.56	10.299 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	47.22	61.14
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.51	0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.20	27.23	3.00	52.32	2.43	0.98
OUTFLOW: ID= 1 (0507)	498.20	21.91	3.25	52.32	2.22	0.93

CALIB STANDHYD (5072)		Area (ha)=	48.90	
ID= 1 DT= 5.0 min		Total Imp(%)=	50.00	Dir. Conn.(%)= 36.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	24.45	24.45

ADD HYD (0122)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0507):	498.20	21.911	3.25	52.32
+ ID2= 2 (5072):	48.90	10.299	3.00	61.14
=====				
ID = 3 (0122):	547.10	28.719	3.08	53.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB STANDHYD (5402)		Area (ha)=	9.40	
ID= 1 DT= 5.0 min		Total Imp(%)=	50.00	Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.70	4.70

Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	250.33	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	101.50

over (min) 5.00 15.00
Storage Coeff. (min)= 3.84 (ii) 12.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08

PEAK FLOW (cms)= 1.28 0.78 1.929 (iii)
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 85.90 39.44 55.70
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.43 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505) AREA (ha)= 30.00
ID= 1 DT= 5.0min QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 402.14

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17

1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18

6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.17
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15

14.33	0.00	45.67	0.25	77.00	0.42	1088.33	0.16	139.67	0.14
14.42	0.00	45.75	0.25	77.08	0.43	1088.42	0.16	139.75	0.14
14.50	0.00	45.83	0.26	77.17	0.43	1088.50	0.15	139.83	0.13
14.58	0.00	45.92	0.25	77.25	0.42	1088.58	0.15	139.92	0.14
14.67	0.00	46.00	0.26	77.33	0.41	1088.67	0.15	140.00	0.13
14.75	0.00	46.08	0.26	77.42	0.43	1088.75	0.16	140.08	0.14
14.83	0.00	46.17	0.25	77.50	0.41	1088.83	0.15	140.17	0.13
14.92	0.69	46.25	0.26	77.58	0.43	1088.92	0.15	140.25	0.13
15.00	0.69	46.33	0.26	77.67	0.39	1089.00	0.15	140.33	0.13
15.08	0.71	46.42	0.26	77.75	0.39	1089.08	0.15	140.42	0.14
15.17	0.74	46.50	0.26	77.83	0.37	1091.17	0.15	140.50	0.14
15.25	0.74	46.58	0.26	77.92	0.39	1091.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	1091.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	1091.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	1091.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	1091.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	1091.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	1091.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	1091.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	1091.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	1100.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	1100.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	1100.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	1100.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	1100.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	1100.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	1100.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	1100.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	1100.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	1100.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	1100.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	1100.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	1111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	1111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	1111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	1111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	1111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	1111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	1111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	1111.58	0.14	142.92	0.12
17.67	0.50	49.00	0.24	80.33	0.33	1111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	1111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	1111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	1111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	1122.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	1122.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	1122.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	1122.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	1122.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	1122.42	0.15	143.75	0.12

18.58	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11

22.67	0.21	54.06	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11

26.93	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.82	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10

31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16

STORE HYD(1605)	AREA	(ha)=	30.00
ID= 1 DT= 5.0min	QPEAK	(cms)=	1.37
	TPEAK	(hrs)=	71.92
	VOLUME	(mm)=	625.27

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25

3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28

7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22

15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15

19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13

23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.1		

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voind.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\
dfc2f2dc-ff44-4a3c-a861-5abd00c73915\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\
dfc2f2dc-ff44-4a3c-a861-5abd00c73915\

DATE: 04-10-2024 TIME: 01:42:37

USER:

COMMENTS: _____

** SIMULATION : 5yrII6.stm **

READ STORM File: C:\Users\jannaormond\AppData\Local\Temp\
fc287717-ea81-4509-917c-0fddd7b9a7f0\d5e9b3f9
Ptotal= 56.50 mm Comments: Mount Hope-6 hour SCS Distribution Desig

TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr
0.00	2.26	1.50	5.65	3.00	12.43	4.50	3.39	
0.17	2.26	1.67	5.65	3.17	12.43	4.67	3.39	
0.33	2.26	1.83	5.65	3.33	12.43	4.83	3.39	
0.50	3.39	2.00	6.78	3.50	5.65	5.00	2.26	
0.67	3.39	2.17	6.78	3.67	5.65	5.17	2.26	
0.83	3.39	2.33	6.78	3.83	5.65	5.33	2.26	

1.00	3.39	2.50	33.90	4.00	4.52	5.50	2.26
1.17	3.39	2.67	61.02	4.17	4.52	5.67	2.26
1.33	3.39	2.83	88.14	4.33	4.52	5.83	2.26

CALIB
NASHYD (5011) Area (ha)= 80.20 Curve Number (CN)= 65.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYTEOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.208 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 12.696
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.225

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

STANDHYD (5012) Area (ha)= 37.32
ID= 1 DT= 5.0 min Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39	
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39	
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39	
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39	
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39	
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39	
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26	
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26	
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26	
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26	
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26	
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26	
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26	
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26	
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26	
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26	
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26	
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26	

Max.Eff.Inten.(mm/hr)= 88.14 31.75
over (min)= 5.00 25.00
Storage Coeff. (min)= 7.05 (ii) 20.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.17 0.05

TOTALS
PEAK FLOW (cms)= 1.98 1.00 2.505 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 15.46 23.87
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.27 0.42

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3
ID1= 1 (5011): 80.20 1.208 3.92 12.70
+ ID2= 2 (5012): 37.32 2.505 3.00 23.87
===== ID = 3 (0100): 117.52 2.734 3.00 16.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1537.5) ----->				
Distance	Elevation	Manning		
0.00	89.30	0.1100		
4.20	89.28	0.1100		
9.03	88.80	0.1100		
21.55	88.78	0.1100		
29.06	88.24	0.1100		
39.87	87.83	0.1100		
55.54	87.84	0.1100 / 0.0700	Main Channel	
57.54	86.84	0.0700	Main Channel	
59.04	86.84	0.0700	Main Channel	
61.04	87.84	0.0700 / 0.1100	Main Channel	
74.10	87.86	0.1100		
87.72	88.07	0.1100		
101.34	88.18	0.1100		
113.53	88.23	0.1100		
128.57	88.32	0.1100		
142.19	88.61	0.1100		
155.81	88.53	0.1100		
183.05	88.85	0.1100		
187.19	88.84	0.1100		
211.21	88.88	0.1100		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34

0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.489E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

<--- hydrograph --->			<-pipe / channel-->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0100)	117.52	2.73	3.00	16.24	0.94
OUTFLOW: ID= 1 (0502)	117.52	1.95	3.67	16.24	0.80

CALIB					
NASHYD (5691)	Area (ha)=	2.30	Curve Number (CN)=	69.3	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.07			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)= 0.175 (i)
TIME TO PEAK (hrs)= 3.000
RUNOFF VOLUME (mm)= 13.430
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.238

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
NASHYD (5021)	Area (ha)=	3.67	Curve Number (CN)=	68.8	
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00	
	U.H. Tp(hrs)=	0.43			

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)= 0.102 (i)
TIME TO PEAK (hrs)= 3.333
RUNOFF VOLUME (mm)= 14.392
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.255

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5092)	Area (ha)=	1.73			
ID= 1 DT= 5.0 min	Total Imp(%)=	50.60	Dir. Conn.(%)=	50.60	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.88	0.85
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	107.39	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 38.81
over (min) 5.00 20.00
Storage Coeff. (min)= 2.80 (ii) 15.49 (ii)

Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07
TOTALS
PEAK FLOW (cms)= 0.21 0.05 0.248 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 22.36 36.59
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.40 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (5082)	Area (ha)=	0.71			
ID= 1 DT= 5.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)=	64.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.52	0.19
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	68.80	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26

1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	34.69
over (min)	5.00	20.00
Storage Coeff. (min)=	2.15 (ii)	15.42 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.31	0.07

PEAK FLOW (cms)=	0.11	0.01	0.118 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	15.57	37.91
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.28	0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5682)	Area (ha)= 0.53
ID= 1 DT= 5.0 min	Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.34	0.19
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	59.44	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	17.74
over (min)	5.00	20.00
Storage Coeff. (min)=	1.97 (ii)	19.32 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.31	0.06

PEAK FLOW (cms)=	0.08	0.01	0.088 (iii)
TIME TO PEAK (hrs)=	3.00	3.25	3.00
RUNOFF VOLUME (mm)=	50.50	12.49	37.18
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.22	0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0501)	Area (ha)= 6.23
ID= 1 DT= 5.0 min	Total Imp(%)= 42.00 Dir. Conn.(%)= 42.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.62	3.61
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	203.80	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

Average Slope (%)=	1.00	1.00
Length (m)=	71.18	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	38.81
over (min)	5.00	15.00
Storage Coeff. (min)=	2.19 (ii)	14.88 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.31	0.08

PEAK FLOW (cms)=	0.14	0.01	0.154 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	22.36	44.30
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.40	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (0510)	Area (ha)= 0.76
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.59	0.17
Dep. Storage (mm)=	6.00	8.00

CALIB
STANDHYD (5752)
ID= 1 DT= 5.0 min

Area (ha)= 0.78
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 31.87
over (min) 5.00 20.00
Storage Coeff. (min)= 2.21 (ii) 15.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.07

TOTALS
PEAK FLOW (cms)= 0.12 0.01 0.133 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 18.63 39.33
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.33 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min

Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 39.29
over (min) 5.00 20.00
Storage Coeff. (min)= 2.96 (ii) 15.59 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	12.34	1.076	3.00	25.30
+ ID2= 2 (0510):	0.76	0.154	3.00	44.30
=====				
ID = 1 (0481):	13.10	1.230	3.00	26.40

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	13.10	1.230	3.00	26.40
+ ID2= 2 (5282):	2.08	0.358	3.00	40.74
=====				
ID = 3 (0481):	15.18	1.588	3.00	28.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	15.18	1.588	3.00	28.37
+ ID2= 2 (5082):	0.53	0.088	3.00	37.18
=====				
ID = 1 (0481):	15.71	1.676	3.00	28.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	15.71	1.676	3.00	28.66
+ ID2= 2 (5092):	2.30	0.175	3.00	13.43
=====				
ID = 3 (0481):	18.01	1.851	3.00	26.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

TOTALS
PEAK FLOW (cms)= 0.33 0.05 0.358 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 22.62 40.74
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.40 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0501):	6.23	0.660	3.00	27.15
+ ID2= 2 (5021):	3.67	0.102	3.33	14.39
=====				
ID = 3 (0481):	9.90	0.710	3.00	22.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	9.90	0.710	3.00	22.42
+ ID2= 2 (5082):	0.71	0.118	3.00	37.91
=====				
ID = 1 (0481):	10.61	0.828	3.00	23.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0481):	10.61	0.828	3.00	23.46
+ ID2= 2 (5092):	1.73	0.248	3.00	36.59
=====				
ID = 3 (0481):	12.34	1.076	3.00	25.30

| ADD HYD (0481) |
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0481):	18.01	1.851	3.00	26.72
+ ID2= 2 (5752):	0.78	0.133	3.00	39.33
=====				
ID = 1 (0481):	18.79	1.984	3.00	27.24

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (0524) |
ID= 1 DT= 5.0 min

Area	(ha)=	Curve Number (CN)=
Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.20	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 0.534 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 21.458
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.380

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| NASHYD (0522) |
ID= 1 DT= 5.0 min

Area	(ha)=	Curve Number (CN)=
Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00
U.H. Tp(hrs)=	0.16	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.143 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 11.870
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.210

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (0580) |
ID= 1 DT= 5.0 min

Area	(ha)=	Dir. Conn.(%)=
Total Imp(%)=	65.00	65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 0.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 111.65 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	17.74
over (min)	5.00	25.00
Storage Coeff. (min)=	2.87 (ii)	20.22 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.28	0.05

TOTALS			
PEAK FLOW (cms)=	0.29	0.02	0.304 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	50.50	12.49	37.19
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.22	0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (0519) |
ID= 1 DT= 5.0 min

Area	(ha)=	Dir. Conn.(%)=
Total Imp(%)=	65.00	65.00

IMPERVIOUS PERVIOUS (i)							
Surface Area	(ha)=	1.35	0.73				
Dep. Storage	(mm)=	6.00	8.00				
Average Slope	(%)=	1.00	1.00				
Length	(m)=	117.76	40.00				
Mannings n	=	0.013	0.250				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	' TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	16.86
over (min)	5.00	25.00
Storage Coeff. (min)=	2.96 (ii)	20.67 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.28	0.05

TOTALS			
PEAK FLOW (cms)=	0.33	0.02	0.337 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	50.50	11.92	36.99

TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529)
ID= 1 DT= 5.0 min
Area (ha)= 1.80
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86

over (min) 5.00 25.00
Storage Coeff. (min)= 2.84 (ii) 20.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.28 0.05
TOTALS
PEAK FLOW (cms)= 0.34 0.01 0.346 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 42.01
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0519): 2.08 0.337 3.00 36.99
+ ID2= 2 (0529): 1.80 0.346 3.00 42.01
===== ID = 3 (0267): 3.88 0.683 3.00 39.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0267): 3.88 0.683 3.00 39.32
+ ID2= 2 (0580): 1.87 0.304 3.00 37.19
===== ID = 1 (0267): 5.75 0.987 3.00 38.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0267): 5.75 0.987 3.00 38.63

+ ID2= 2 (0522): 3.31 0.143 3.08 11.87
===== ID = 3 (0265): 9.06 1.129 3.00 28.85

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0523)
ID= 1 DT= 5.0 min
Area (ha)= 6.61
Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 86.10
over (min) 5.00 15.00
Storage Coeff. (min)= 4.19 (ii) 13.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
TOTALS
PEAK FLOW (cms)= 0.78 0.22 0.968 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 50.50 21.71 36.10
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.38 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0265): 9.06 1.129 3.00 28.85
+ ID2= 2 (0523): 6.61 0.968 3.00 36.10
===== ID = 3 (0260): 15.67 2.097 3.00 31.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0525)
ID= 1 DT= 5.0 min
Area (ha)= 1.45
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	31.33	
over (min)	5.00	20.00	
Storage Coeff. (min)=	2.66 (ii)	16.48 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.29	0.06	
TOTALS			
PEAK FLOW (cms)=	0.23	0.02	0.245 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	18.34	39.24
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.32	0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0272)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0260):	15.67	2.097	3.00	31.91
+ ID2= 2 (0525):	1.45	0.245	3.00	39.24
=====				
ID = 3 (0272):	17.12	2.343	3.00	32.53

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0264)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0272):	17.12	2.343	3.00	32.53
+ ID2= 2 (0524):	7.22	0.534	3.08	21.46
=====				
ID = 3 (0264):	24.34	2.823	3.00	29.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0527)		Area (ha)= 1.68	
ID= 1 DT= 5.0 min		Total Imp(%)= 76.00	Dir. Conn.(%)= 52.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.28		0.40
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	105.83		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	126.57
over (min)	5.00	15.00
Storage Coeff. (min)=	2.78 (ii)	10.69 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.28	0.09

TOTALS			
PEAK FLOW (cms)=	0.21	0.09	0.291 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	50.50	32.10	41.66
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.57	0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0270)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0264):	24.34	2.823	3.00	29.25
+ ID2= 2 (0527):	1.68	0.291	3.00	41.66
=====				
ID = 3 (0270):	26.02	3.114	3.00	30.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (5202)		Area (ha)= 2.27	
ID= 1 DT= 5.0 min		Total Imp(%)= 61.00	Dir. Conn.(%)= 61.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.38		0.89
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	123.02		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39

0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	33.98
over (min)	5.00	20.00
Storage Coeff. (min)=	3.04 (ii)	16.42 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.27	0.06

PEAK FLOW (cms)=	0.33	0.05	0.366 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	19.77	38.51
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.35	0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0273)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0270):	26.02	3.114	3.00	30.05
+ ID2= 2 (5202):	2.27	0.366	3.00	38.51
=====				
ID = 3 (0273):	28.29	3.479	3.00	30.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0274)	OVERFLOW IS OFF

IN= 2---> OUT= 1
DT= 5.0 min

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1400	0.8343
0.0195	0.2416	0.2360	1.0014
0.0700	0.5564	0.3420	1.6616

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0273)	28.290	3.479	3.00	30.73
OUTFLOW: ID= 1 (0274)	28.290	0.118	6.00	30.55

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.39
TIME SHIFT OF PEAK FLOW (min)=180.00
MAXIMUM STORAGE USED (ha.m.)= 0.7475

CALIB
STANDHYD (0526)
ID= 1 DT= 5.0 min

Area (ha)= 0.94
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 0.21
Surface Area	0.73	
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	79.16	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26

	IMPERVIOUS (ha)=	PERVIOUS (i) 0.32
Surface Area	1.12	
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	97.98	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	26.59
over (min)	5.00	20.00
Storage Coeff. (min)=	2.65 (ii)	17.42 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.29	0.06
PEAK FLOW (cms)=	0.27	0.01
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	50.50	15.73
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT	0.89	0.28

TOTALS

PEAK FLOW (cms)= 0.27 0.01 0.281 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 15.73 42.84
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.28 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	34.13
over (min)	5.00	20.00
Storage Coeff. (min)=	2.34 (ii)	15.69 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.30	0.07
PEAK FLOW (cms)=	0.18	0.01
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	19.85
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT	0.89	0.35

TOTALS

PEAK FLOW (cms)= 0.18 0.01 0.186 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 19.85 43.75
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.35 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279)
IN= 2---> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0476	0.0432
0.0096	0.0220	0.0579	0.0480
0.0206	0.0306	0.0671	0.0528
0.0297	0.0360	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0526)	0.940	0.186	3.00	43.75
OUTFLOW: ID= 1 (0279)	0.940	0.018	3.67	43.14

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.64
TIME SHIFT OF PEAK FLOW (min)= 40.00
MAXIMUM STORAGE USED (ha.m.)= 0.0286

CALIB
STANDHYD (0574)
ID= 1 DT= 5.0 min

Area (ha)= 1.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276)
IN= 2---> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0730	0.0642
0.0150	0.0327	0.0890	0.0712
0.0310	0.0455	0.1030	0.0784
0.0450	0.0536	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0574)	1.440	0.281	3.00	42.84
OUTFLOW: ID= 1 (0276)	1.440	0.027	3.58	42.46

PEAK FLOW REDUCTION [Qout/Qin](%)= 9.77
TIME SHIFT OF PEAK FLOW (min)= 35.00
MAXIMUM STORAGE USED (ha.m.)= 0.0427

ADD HYD (0275)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0276):	1.44	0.027	3.58	42.46
+ ID2= 2 (0279):	0.94	0.018	3.67	43.14
ID = 3 (0275):	2.38	0.045	3.58	42.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0571)
ID= 1 DT= 5.0 min

Area (ha)= 19.59
Total Imp(%)= 68.00 Dir. Conn.(%)= 50.00

	IMPERVIOUS (ha)=	PERVIOUS (i) 6.27
Surface Area	13.32	
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	361.39	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 47.88
over (min) 5.00 20.00
Storage Coeff. (min)= 5.81 (ii) 17.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

PEAK FLOW (cms)= 2.24 0.47 2.552 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 18.28 34.39
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.32 0.61

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (0572)			
ID= 1 DT= 5.0 min			
	Area (ha)= 11.31		
	Total Imp(%)= 71.00	Dir. Conn.(%)= 50.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	8.03	3.28	
Dep. Storage (mm)=	6.00	8.00	

Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 94.28
over (min) 5.00 15.00
Storage Coeff. (min)= 4.93 (ii) 13.82 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 1.32 0.49 1.727 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 50.50 27.37 38.94
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.48 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0282)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0571):	19.59	2.552	3.00	34.39
+ ID2= 2 (0572):	11.31	1.727	3.00	38.94
=====				
ID = 3 (0282):	30.90	4.279	3.00	36.05

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (0573)			
ID= 1 DT= 5.0 min			
	Area (ha)= 2.66		
	Total Imp(%)= 60.00	Dir. Conn.(%)= 60.00	
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.06	1.06	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	133.17	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 29.87

over (min)	5.00	20.00	
Storage Coeff. (min)=	3.19 (ii)	17.28 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.27	0.06	
			TOTALS
PEAK FLOW (cms)=	0.39	0.05	0.417 (iii)
TIME TO PEAK (hrs)=	3.00	3.25	3.00
RUNOFF VOLUME (mm)=	50.50	17.54	37.31
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.31	0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0285)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0282):	30.90	4.279	3.00	36.05
+ ID2= 2 (0573):	2.66	0.417	3.00	37.31
=====				
ID = 3 (0285):	33.56	4.695	3.00	36.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0280)			
IN= 2---> OUT= 1			
DT= 5.0 min			
	OVERFLOW IS OFF		
	OUTFLOW	STORAGE	OUTFLOW
	(cms)	(ha.m.)	(cms)
	0.0000	0.0000	0.2300
	0.0230	0.3704	0.2810
	0.0900	0.8066	0.4120
			2.2335
	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
INFLOW : ID= 2 (0285)	33.560	4.695	3.00
OUTFLOW: ID= 1 (0280)	33.560	0.186	5.42
			35.56
	PEAK FLOW REDUCTION [Qout/Qin](%)=	3.96	
	TIME SHIFT OF PEAK FLOW (min)=	145.00	
	MAXIMUM STORAGE USED (ha.m.)=	1.0295	

ADD HYD (0102)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0274):	28.29	0.118	6.00	30.55	
+ ID2= 2 (0275):	2.38	0.045	3.58	42.73	
=====					
ID = 3 (0102):	30.67	0.153	5.00	31.49	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.					

ADD HYD (0102)					
3 + 2 = 1					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0102):	30.67	0.153	5.00	31.49	
+ ID2= 2 (0280):	33.56	0.186	5.42	35.56	
=====					
ID = 1 (0102):	64.23	0.338	5.17	33.62	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.					

ADD HYD (0102)					
1 + 2 = 3					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 1 (0102):	64.23	0.338	5.17	33.62	
+ ID2= 2 (0481):	18.79	1.984	3.00	27.24	
=====					
ID = 3 (0102):	83.02	2.092	3.00	32.18	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.					

ADD HYD (0102)					
3 + 2 = 1					
	AREA	QPEAK	TPEAK	R.V.	
	(ha)	(cms)	(hrs)	(mm)	
ID1= 3 (0102):	83.02	2.092	3.00	32.18	
+ ID2= 2 (0502):	117.52	1.949	3.67	16.24	
=====					
ID = 1 (0102):	200.54	3.234	3.00	22.84	
NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.					

| ROUTE CHN(0503) |
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 /0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 /0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	200.54	3.23	3.00	22.84	1.01	0.90
OUTFLOW: ID= 1 (0503)	200.54	2.68	3.08	22.84	0.92	0.85

CALIB			
STANDHYD (5032)			
ID= 1 DT= 5.0 min			
Area	(ha)=	13.80	
Total Imp(%)=	76.00	Dir. Conn.(%)=	67.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.49	3.31
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	47.47
over (min)	5.00	20.00
Storage Coeff. (min)=	5.23 (ii)	16.94 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.21	0.06

PEAK FLOW (cms)=	2.14	0.25	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.17	2.311 (iii)
RUNOFF VOLUME (mm)=	50.50	20.36	40.55
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.36	0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0503):	200.54	2.683	3.08	22.84
+ ID2= 2 (5032):	13.80	2.311	3.00	40.55
=====				
ID = 3 (0104):	214.34	4.822	3.00	23.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0504) |
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 /0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	

569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.11	81.96	.117E+02	0.0	0.18	23.95	
0.23	82.08	.492E+02	0.1	0.28	15.67	
0.34	82.19	.135E+03	0.2	0.34	13.00	
0.45	82.30	.312E+03	0.4	0.32	13.44	
0.57	82.42	.116E+04	1.2	0.28	15.74	
0.68	82.53	.287E+04	3.5	0.32	13.85	
0.79	82.64	.549E+04	7.0	0.33	13.13	
0.91	82.76	.101E+05	14.9	0.39	11.28	
1.02	82.87	.155E+05	27.5	0.47	9.38	
1.13	82.98	.214E+05	45.2	0.55	7.89	
1.25	83.10	.277E+05	67.2	0.64	6.87	
1.36	83.21	.344E+05	93.6	0.71	6.12	
1.47	83.32	.426E+05	125.3	0.77	5.67	
1.59	83.44	.516E+05	162.2	0.82	5.30	
1.70	83.55	.620E+05	204.2	0.86	5.06	
1.81	83.66	.747E+05	254.0	0.89	4.90	
1.95	83.80	.924E+05	324.9	0.92	4.74	
2.08	83.93	.113E+06	411.3	0.95	4.59	
2.21	84.06	.135E+06	515.5	1.00	4.37	

<---- hydrograph ---->				<-pipe / channel->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0104)	214.34	4.82	3.00	23.98	0.72	
OUTFLOW: ID= 1 (0504)	214.34	3.35	3.17	23.98	0.68	

CALIB		
STANDHYD (5042)	Area (ha)=	7.70
ID= 1 DT= 5.0 min	Total Imp(%)=	75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS			PERVIOUS (i)	
Surface Area	(ha)=	5.77	1.92	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	226.57	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39		
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39		
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39		
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39		
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39		
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39		
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26		
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26		
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26		
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26		
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26		
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26		
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26		
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26		
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26		
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26		
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26		
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26		

Max.Eff.Inten.(mm/hr)=	88.14	44.72
over (min)	5.00	20.00
Storage Coeff. (min)=	4.39 (ii)	16.38 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.23	0.06
PEAK FLOW (cms)=	1.18	0.14
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	18.94
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.34
		TOTALS
		1.275 (iii)
		3.00
		39.45
		56.50
		0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0504):	214.34	3.354	3.17	23.98

+ ID2= 2 (5042):	7.70	1.275	3.00	39.45
ID = 3 (0106):	222.04	4.014	3.00	24.51

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (5212)	Area (ha)=	15.70
ID= 1 DT= 5.0 min	Total Imp(%)=	75.00 Dir. Conn.(%)= 66.00

IMPERVIOUS			PERVIOUS (i)	
Surface Area	(ha)=	11.78	3.93	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	323.52	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	24.08	41.52
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.43	0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0114)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	222.04	4.014	3.00	24.51
+ ID2= 2 (5212):	15.70	2.634	3.00	41.52
ID = 3 (0114):	237.74	6.649	3.00	25.64

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 / 0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 / 0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	
481.25	82.81	0.0900	

Max.Eff.Inten.(mm/hr)=	88.14	56.11
over (min)	5.00	20.00
Storage Coeff. (min)=	5.44 (ii)	16.38 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.20	0.06
PEAK FLOW (cms)=	2.39	0.36
		TOTALS
		2.634 (iii)

501.51	83.16	0.0900				
<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.12	79.13	.418E+03	0.4	0.15	18.59	
0.23	79.25	.899E+03	1.3	0.25	11.41	
0.35	79.36	.140E+04	2.7	0.33	8.70	
0.46	79.48	.191E+04	4.4	0.39	7.22	
0.58	79.59	.244E+04	6.5	0.46	6.26	
0.69	79.71	.299E+04	8.9	0.51	5.58	
0.81	79.82	.355E+04	11.7	0.56	5.08	
0.92	79.94	.413E+04	14.7	0.61	4.68	
1.04	80.05	.472E+04	18.1	0.65	4.36	
1.15	80.17	.533E+04	21.7	0.70	4.09	
1.27	80.28	.598E+04	25.7	0.74	3.88	
1.38	80.40	.666E+04	29.7	0.76	3.74	
1.50	80.51	.740E+04	33.7	0.78	3.67	
1.61	80.63	.822E+04	38.1	0.79	3.59	
1.73	80.74	.909E+04	43.1	0.81	3.52	
1.84	80.86	.100E+05	48.6	0.83	3.45	
1.96	80.97	.111E+05	48.4	0.74	3.83	
2.07	81.09	.128E+05	43.8	0.59	4.86	
2.19	81.21	.155E+05	40.6	0.45	6.35	
<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.74	6.65	3.00	25.64	0.58	0.46
OUTFLOW: ID= 1 (0505)	237.74	5.82	3.08	25.64	0.54	0.43

CALIB			
STANDHYD (5052)	Area (ha)=	15.90	
ID= 1 DT= 5.0 min	Total Imp(%)=	74.00	Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.77	4.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	325.58	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	41.63
over (min)	5.00	20.00
Storage Coeff. (min)=	5.46 (ii)	17.79 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.20	0.06
TOTALS		
PEAK FLOW (cms)=	2.38	0.26
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	18.34
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.32
		0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0505):	237.74	5.821	3.08	25.64
+ ID2= 2 (5052):	15.90	2.558	3.00	39.24
=====				
ID = 3 (0108):	253.64	8.071	3.00	26.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)			
IN= 2----> OUT= 1	Routing time step (min)=	5.00	
<----- DATA FOR SECTION (304.1) ----->			
Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 /0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 /0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.11	78.34	.979E+01	0.0	0.23	21.53	
0.23	78.45	.392E+02	0.0	0.37	13.56	
0.34	78.56	.881E+02	0.1	0.48	10.35	
0.46	78.68	.157E+03	0.3	0.58	8.54	
0.57	78.79	.245E+03	0.6	0.67	7.36	
0.68	78.91	.352E+03	0.9	0.76	6.52	
0.80	79.02	.480E+03	1.4	0.84	5.88	
0.91	79.13	.627E+03	1.9	0.92	5.38	
1.03	79.25	.793E+03	2.7	0.99	4.98	
1.15	79.37	.103E+04	3.8	1.09	4.55	
1.28	79.50	.135E+04	5.2	1.16	4.28	
1.40	79.62	.175E+04	7.1	1.20	4.12	
1.52	79.75	.228E+04	9.3	1.21	4.08	
1.65	79.87	.318E+04	11.7	1.10	4.52	
1.77	80.00	.524E+04	15.8	0.90	5.52	
1.90	80.12	.973E+04	24.3	0.74	6.69	
2.02	80.24	.158E+05	39.7	0.75	6.62	

2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44
<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0108)	253.64	8.07	3.00	26.49	1.46
OUTFLOW: ID= 1 (0506)	253.64	7.49	3.08	26.49	1.42

CALIB			
STANDHYD (5062)	Area (ha)=	11.70	
ID= 1 DT= 5.0 min	Total Imp(%)=	75.00	Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.78	2.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	279.28	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	49.01

over (min) 5.00 20.00
Storage Coeff. (min)= 4.98 (ii) 16.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

PEAK FLOW (cms)= 1.77 0.23
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 50.50 20.65
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.37

TOTALS

1.929 (iii)
3.00
40.05
56.50
0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)
1 + 2 = 3

ID1= 1 (0506): 253.64 7.488 3.08 26.49
+ ID2= 2 (05062): 11.70 1.929 3.00 40.05
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min

Area (ha)= 1.70
Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr

0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 38.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.79 (ii) 15.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07

PEAK FLOW (cms)= 0.21 0.04
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 50.50 17.16
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1 Routing time step (min)= 5.00

----- DATA FOR SECTION (553.6) ----->
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100

60.88 81.23 0.1100 /0.0700 Main Channel
69.13 79.02 0.0700 Main Channel
92.42 79.04 0.0700 Main Channel
98.70 80.89 0.0700 /0.1100 Main Channel
128.88 81.13 0.1100
199.00 81.23 0.1100

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 46.23
over (min) 5.00 20.00
Storage Coeff. (min)= 3.31 (ii) 15.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.26 0.07

PEAK FLOW (cms)= 0.42 0.07
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 50.50 20.13
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .361E+03 0.6 0.24 9.91
0.23 79.25 .776E+03 2.1 0.40 6.09
0.35 79.37 .121E+04 4.3 0.52 4.65
0.47 79.48 .165E+04 7.1 0.63 3.85
0.59 79.60 .211E+04 10.5 0.72 3.34
0.70 79.72 .258E+04 14.4 0.81 2.98
0.82 79.84 .307E+04 18.8 0.89 2.71
0.94 79.95 .357E+04 23.8 0.97 2.50
1.05 80.07 .408E+04 29.2 1.04 2.33
1.17 80.19 .461E+04 35.1 1.10 2.19
1.29 80.30 .515E+04 41.5 1.17 2.07
1.41 80.42 .571E+04 48.4 1.23 1.97
1.52 80.54 .631E+04 55.8 1.28 1.88
1.64 80.66 .695E+04 63.8 1.33 1.81
1.76 80.77 .762E+04 72.3 1.38 1.76
1.87 80.89 .833E+04 81.4 1.42 1.71
2.00 81.02 .931E+04 92.4 1.44 1.68
2.13 81.14 .109E+05 104.8 1.39 1.74
2.25 81.27 .140E+05 120.9 1.25 1.93

----- hydrograph -----> <----- pipe / channel ----->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5102) 1.70 0.24 3.00 34.49 0.05 0.24
OUTFLOW: ID= 1 (0511) 1.70 0.18 3.00 34.48 0.03 0.24

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min

Area (ha)= 3.00
Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0511):	1.70	0.176	3.00	34.48
+ ID2= 2 (5112):	3.00	0.468	3.00	37.74
=====				
ID = 3 (0117):	4.70	0.644	3.00	36.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)	Routing time step (min)'= 5.00
IN= 2--> OUT= 1	

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning	
0.00	80.80	0.0900	
9.73	80.46	0.0900	
14.10	82.04	0.0900	
17.18	82.28	0.0900	
41.13	82.12	0.0900 /0.0700	Main Channel
46.88	79.71	0.0700	Main Channel
51.41	80.90	0.0700 /0.0900	Main Channel
94.29	80.56	0.0900	
175.64	80.72	0.0900	
192.09	80.85	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0117)	4.70	0.64	3.00	36.56	0.69	0.43
OUTFLOW: ID= 1 (0512)	4.70	0.38	3.08	36.50	0.57	0.37

CALIB	Area (ha)= 3.90	
STANDHYD (5122)	Total Imp(%)= 68.00	Dir. Conn.(%)= 57.00
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.65	1.25
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	161.25	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	45.55
over (min)	5.00	20.00
Storage Coeff. (min)=	3.58 (ii)	15.48 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.26	0.07

PEAK FLOW (cms)=	0.53	0.09	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.17	0.597 (iii)
RUNOFF VOLUME (mm)=	50.50	20.00	37.38
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.35	0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0512):	4.70	0.384	3.08	36.50
+ ID2= 2 (5122):	3.90	0.597	3.00	37.38
=====				
ID = 3 (0119):	8.60	0.955	3.00	36.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0110):	265.34	8.776	3.00	27.09
+ ID2= 2 (0119):	8.60	0.955	3.00	36.90
=====				
ID = 3 (0120):	273.94	9.731	3.00	27.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 44.10	Curve Number (CN)= 62.0
NASHYD (6011)	Ia (mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)= 0.83	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)=	0.608 (i)
TIME TO PEAK (hrs)=	3.917
RUNOFF VOLUME (mm)=	11.521
TOTAL RAINFALL (mm)=	56.500
RUNOFF COEFFICIENT =	0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)= 11.00	
STANDHYD (6012)	Total Imp(%)= 28.00	Dir. Conn.(%)= 16.00
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.80	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr

0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 26.15
over (min) 5.00 20.00
Storage Coeff. (min)= 4.88 (ii) 19.74 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

PEAK FLOW (cms)= 0.41 0.30 0.600 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.46 19.39
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.34

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	0.608	3.92	11.52
+ ID2= 2 (6012):	11.00	0.600	3.00	19.39

ID = 3 (0124): 55.10 0.784 3.50 13.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
NASHYD (6021)	Area (ha)=	43.60	Curve Number (CN)=	62.0
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
	U.H. Tp(hrs)=	0.95		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.545 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6022)	Area (ha)=	12.90		
ID= 1 DT= 5.0 min	Total Imp(%)=	35.00	Dir. Conn.(%)=	23.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	4.51	8.38	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	293.26	40.00	
Mannings n	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 26.96
over (min) 5.00 20.00
Storage Coeff. (min)= 5.12 (ii) 19.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

PEAK FLOW (cms)= 0.69 0.33 0.896 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.66 22.13
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.39

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6021):	43.60	0.545	4.00	11.52
+ ID2= 2 (6022):	12.90	0.896	3.00	22.13

ID = 3 (0125): 56.50 0.981 3.00 13.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0124):	55.10	0.784	3.50	13.09
+ ID2= 2 (0125):	56.50	0.981	3.00	13.94

ID = 3 (0126): 111.60 1.699 3.00 13.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)				
IN= 2---> OUT= 1	Routing time step (min)=	5.00		

<----- DATA FOR SECTION (2135.9) ----->			
Distance	Elevation	Manning	
0.00	92.58	0.1400	
8.54	92.59	0.1400	
22.11	92.47	0.1400	
48.74	91.83	0.1400	
67.59	91.58	0.1400	
86.45	91.21	0.1400	
103.50	90.80	0.1400	
118.09	90.23	0.1400	
127.84	90.09	0.1400 / 0.0700	Main Channel
129.84	89.59	0.0700	Main Channel
130.34	90.09	0.0700 / 0.1400	Main Channel
140.57	90.14	0.1400	
161.87	90.11	0.1400	
177.03	90.04	0.1400	
188.67	89.87	0.1400	
199.59	90.31	0.1400	
212.02	90.96	0.1400	

225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV. TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	1.70	3.00	13.52	0.57	0.21
OUTFLOW: ID= 1 (0603)	111.60	1.06	4.67	13.52	0.53	0.20

CALIB						
NASHYD (0613)	Area (ha)=	1.77	Curve Number (CN)=	66.0		
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00		
	U.H. Tp(hrs)=	0.22				

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39

0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 0.302

PEAK FLOW (cms)= 0.070 (i)
TIME TO PEAK (hrs)= 3.083
RUNOFF VOLUME (mm)= 13.099
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.232

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (6222)	Area (ha)=	2.02				
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.58	0.44
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	116.05	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39

0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	21.42
over (min)	5.00	20.00
Storage Coeff. (min)=	2.94 (ii)	19.03 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.28	0.06
PEAK FLOW (cms)=	0.38	0.02
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	50.50	14.88
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.26

TOTALS

0.392 (iii)

3.00

42.66

56.50

0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 69.9 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (0614)	Area (ha)=	1.50				
ID= 1 DT= 5.0 min	Total Imp(%)=	69.00	Dir. Conn.(%)=	50.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.04	0.47
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	100.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	49.89
over (min)	5.00	15.00
Storage Coeff. (min)=	2.69 (ii)	14.16 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.29	0.08

TOTALS

0.216 (iii)

3.00

34.48

56.50

0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 63.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB						
STANDHYD (0615)	Area (ha)=	2.14				
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00		

	IMPERVIOUS	PERVIOUS (i)

Surface Area (ha)= 1.67 0.47
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 119.44 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 21.42
over (min) 5.00 20.00
Storage Coeff. (min)= 2.99 (ii) 19.08 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.06
TOTALS
PEAK FLOW (cms)= 0.40 0.02 0.415 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 14.88 42.66
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.26 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0618)
ID= 1 DT= 5.0 min

Area (ha)= 1.49
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.16 0.33
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 99.67 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 106.27
over (min) 5.00 15.00
Storage Coeff. (min)= 2.68 (ii) 11.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.09

TOTALS
PEAK FLOW (cms)= 0.18 0.06 0.231 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 50.50 23.69 37.09
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.42 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6302)
ID= 1 DT= 5.0 min

Area (ha)= 0.86
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.81 0.05
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 75.72 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 24.07
over (min) 5.00 10.00
Storage Coeff. (min)= 2.27 (ii) 5.31 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.30 0.16
TOTALS
PEAK FLOW (cms)= 0.20 0.00 0.200 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 48.18
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0617)
ID= 1 DT= 5.0 min

Area (ha)= 2.31
Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.80 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 124.10 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26

1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26
Max.Eff.Inten.(mm/hr)=	88.14	123.95					
over (min)	5.00	15.00					
Storage Coeff. (min)=	3.06 (ii)	11.03 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.27	0.09					
PEAK FLOW (cms)=	0.28	0.11					
TIME TO PEAK (hrs)=	3.00	3.08					
RUNOFF VOLUME (mm)=	50.50	27.66					
TOTAL RAINFALL (mm)=	56.50	56.50					
RUNOFF COEFFICIENT =	0.89	0.49					

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0614):	1.50	0.216	3.00	34.48
+ ID2= 2 (0615):	2.14	0.415	3.00	42.66
ID = 3 (0290):	3.64	0.631	3.00	39.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0290):	3.64	0.631	3.00	39.29
+ ID2= 2 (0617):	2.31	0.372	3.00	39.08
ID = 1 (0290):	5.95	1.003	3.00	39.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0290):	5.95	1.003	3.00	39.21
+ ID2= 2 (0618):	1.49	0.231	3.00	37.09
ID = 3 (0290):	7.44	1.234	3.00	38.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
3 + 2 = 1				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0290):	7.44	1.234	3.00	38.78
+ ID2= 2 (6222):	2.02	0.392	3.00	42.66
ID = 1 (0290):	9.46	1.626	3.00	39.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0290):	9.46	1.626	3.00	39.61
+ ID2= 2 (6302):	0.86	0.200	3.00	48.18
ID = 3 (0290):	10.32	1.826	3.00	40.32

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6212)	Area (ha)=	1.15		
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.75		0.40
Dep. Storage (mm)=	6.00		8.00
Average Slope (%)=	1.00		1.00
Length (m)=	87.56		40.00
Mannings n =	0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	16.86		
over (min)	5.00	25.00		
Storage Coeff. (min)=	2.48 (ii)	20.19 (ii)		
Unit Hyd. Tpeak (min)=	5.00	25.00		
Unit Hyd. peak (cms)=	0.29	0.05		
PEAK FLOW (cms)=	0.18	0.01		
TIME TO PEAK (hrs)=	3.00	3.33		
RUNOFF VOLUME (mm)=	50.50	11.92		
TOTAL RAINFALL (mm)=	56.50	56.50		
RUNOFF COEFFICIENT =	0.89	0.21		

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB				
STANDHYD (6232)	Area (ha)=	0.85		
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	0.55	0.30
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	75.28	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	16.86		
over (min)	5.00	20.00		
Storage Coeff. (min)=	2.27 (ii)	19.98 (ii)		
Unit Hyd. Tpeak (min)=	5.00	20.00		
Unit Hyd. peak (cms)=	0.30	0.06		

PEAK FLOW (cms)=	0.13	0.01		
TIME TO PEAK (hrs)=	3.00	3.25		
RUNOFF VOLUME (mm)=	50.50	11.92		
TOTAL RAINFALL (mm)=	56.50	56.50		
RUNOFF COEFFICIENT =	0.89	0.21		

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6212):	1.15	0.187	3.00	36.99
+ ID2= 2 (6232):	0.85	0.140	3.00	36.98
=====				
ID = 3 (0288):	2.00	0.327	3.00	36.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0626)
ID= 1 DT= 5.0 min

Area (ha)=	0.96
Total Imp(%)=	60.00
Dir. Conn.(%)=	60.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (mm)=
Surface Area	0.58	0.38
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	80.00	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	34.84	
over (min)	5.00	20.00	
Storage Coeff. (min)=	2.35 (ii)	15.60 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.30	0.07	
			TOTALS
PEAK FLOW (cms)=	0.14	0.02	0.155 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	50.50	20.24	38.38
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.36	0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0288):	2.00	0.327	3.00	36.98
+ ID2= 2 (0290):	10.32	1.826	3.00	40.32
=====				
ID = 3 (0297):	12.32	2.153	3.00	39.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0297):	12.32	2.153	3.00	39.78
+ ID2= 2 (0613):	1.77	0.070	3.00	13.10
=====				
ID = 1 (0297):	14.09	2.212	3.00	36.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0297):	14.09	2.212	3.00	36.43
+ ID2= 2 (0626):	0.96	0.155	3.00	38.38
=====				
ID = 3 (0297):	15.05	2.366	3.00	36.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0302)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1070	0.3146
0.0150	0.1715	0.7100	0.8031

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0297)	15.050	2.366	3.00	36.56
OUTFLOW: ID= 1 (0302)	15.050	0.207	4.00	36.36

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.76
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.3959

CALIB
STANDHYD (6202)
ID= 1 DT= 5.0 min

Area (ha)=	1.26
Total Imp(%)=	94.00
Dir. Conn.(%)=	94.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (mm)=
Surface Area	1.18	0.08
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	91.65	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	24.07	
over (min)	5.00	10.00	
Storage Coeff. (min)=	2.55 (ii)	5.59 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.29	0.16	
			TOTALS
PEAK FLOW (cms)=	0.29	0.00	0.292 (iii)
TIME TO PEAK (hrs)=	3.00	3.00	3.00
RUNOFF VOLUME (mm)=	50.50	11.92	48.18
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.21	0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0292)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0580	0.0848
0.0090	0.0366	0.0000	0.0000

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (6202)	1.260	0.292	3.00	48.18
OUTFLOW: ID= 1 (0292)	1.260	0.018	4.00	47.37

PEAK FLOW REDUCTION [Qout/Qin](%)= 6.32
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0459

CALIB
STANDHYD (0606)
ID= 1 DT= 5.0 min

Area (ha)= 1.98
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.29 0.69
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 114.89 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 16.86
over (min)= 5.00 25.00
Storage Coeff. (min)= 2.92 (ii) 20.63 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.28 0.05

TOTALS
PEAK FLOW (cms)= 0.31 0.02 0.321 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 36.99
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0612)
ID= 1 DT= 5.0 min

Area (ha)= 2.18
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.05 0.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 120.55 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 24.07
over (min)= 5.00 10.00
Storage Coeff. (min)= 3.01 (ii) 6.05 (ii)

Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.28 0.15

TOTALS
PEAK FLOW (cms)= 0.50 0.01 0.503 (iii)
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 50.50 11.92 48.18
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.21 0.85

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0295)
IN= 2---> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
2.180	0.503	3.00	48.18
2.180	0.032	4.00	47.72

INFLOW : ID= 2 (0612)
OUTFLOW: ID= 1 (0295)

PEAK FLOW REDUCTION [Qout/Qin](%)= 6.41
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.0793

ADD HYD (0306)
1 + 2 = 3

ID1= 1 (0292):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	1.26	0.018	4.00	47.37
+ ID2= 2 (0295):	2.18	0.032	4.00	47.72
=====				
ID = 3 (0306):	3.44	0.051	4.00	47.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306)
3 + 2 = 1

ID1= 3 (0306):	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
	3.44	0.051	4.00	47.59
+ ID2= 2 (0606):	1.98	0.321	3.00	36.99
=====				
ID = 1 (0306):	5.42	0.345	3.00	43.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning	
0.00	92.50	0.0700	
36.57	92.00	0.0700	
90.03	91.00	0.0700	
124.58	90.00	0.0700 / 0.0350	Main Channel
128.34	89.59	0.0350	Main Channel
129.84	89.59	0.0350	Main Channel
132.39	90.00	0.0350 / 0.0700	Main Channel
163.76	91.00	0.0700	
187.47	91.00	0.0700	
203.83	91.00	0.0700	
306.44	92.00	0.0700	

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

-----<---- hydrograph ---->-----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0306) 5.42 0.34 3.00 43.72 0.18 0.60
OUTFLOW: ID= 1 (0304) 5.42 0.16 3.08 43.71 0.12 0.48

-----CALIB
| STANDHYD (0616) | Area (ha)= 0.44
| ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.34 0.10
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 54.16 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 | 1.583 5.65 | 3.083 12.43 | 4.58 3.39
0.167 2.26 | 1.667 5.65 | 3.167 12.43 | 4.67 3.39
0.250 2.26 | 1.750 5.65 | 3.250 12.43 | 4.75 3.39
0.333 2.26 | 1.833 5.65 | 3.333 12.43 | 4.83 3.39
0.417 2.26 | 1.917 5.65 | 3.417 12.43 | 4.92 3.39
0.500 2.26 | 2.000 5.65 | 3.500 12.43 | 5.00 3.39
0.583 3.39 | 2.083 6.78 | 3.583 5.65 | 5.08 2.26
0.667 3.39 | 2.167 6.78 | 3.667 5.65 | 5.17 2.26
0.750 3.39 | 2.250 6.78 | 3.750 5.65 | 5.25 2.26
0.833 3.39 | 2.333 6.78 | 3.833 5.65 | 5.33 2.26
0.917 3.39 | 2.417 6.78 | 3.917 5.65 | 5.42 2.26
1.000 3.39 | 2.500 6.78 | 4.000 5.65 | 5.50 2.26
1.083 3.39 | 2.583 33.90 | 4.083 4.52 | 5.58 2.26
1.167 3.39 | 2.667 33.90 | 4.167 4.52 | 5.67 2.26
1.250 3.39 | 2.750 61.02 | 4.250 4.52 | 5.75 2.26
1.333 3.39 | 2.833 61.02 | 4.333 4.52 | 5.83 2.26
1.417 3.39 | 2.917 88.14 | 4.417 4.52 | 5.92 2.26
1.500 3.39 | 3.000 88.14 | 4.500 4.52 | 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 34.84
over (min) 5.00 20.00
Storage Coeff. (min)= 1.86 (ii) 15.11 (ii)

Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.32 0.07
TOTALS
PEAK FLOW (cms)= 0.08 0.01 0.088 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 20.24 43.82
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----CALIB
| STANDHYD (6102) | Area (ha)= 2.49
| ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.94 0.55
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 128.84 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 | 1.583 5.65 | 3.083 12.43 | 4.58 3.39
0.167 2.26 | 1.667 5.65 | 3.167 12.43 | 4.67 3.39
0.250 2.26 | 1.750 5.65 | 3.250 12.43 | 4.75 3.39
0.333 2.26 | 1.833 5.65 | 3.333 12.43 | 4.83 3.39
0.417 2.26 | 1.917 5.65 | 3.417 12.43 | 4.92 3.39
0.500 2.26 | 2.000 5.65 | 3.500 12.43 | 5.00 3.39
0.583 3.39 | 2.083 6.78 | 3.583 5.65 | 5.08 2.26
0.667 3.39 | 2.167 6.78 | 3.667 5.65 | 5.17 2.26
0.750 3.39 | 2.250 6.78 | 3.750 5.65 | 5.25 2.26
0.833 3.39 | 2.333 6.78 | 3.833 5.65 | 5.33 2.26
0.917 3.39 | 2.417 6.78 | 3.917 5.65 | 5.42 2.26
1.000 3.39 | 2.500 6.78 | 4.000 5.65 | 5.50 2.26
1.083 3.39 | 2.583 33.90 | 4.083 4.52 | 5.58 2.26
1.167 3.39 | 2.667 33.90 | 4.167 4.52 | 5.67 2.26

1.250 3.39 | 2.750 61.02 | 4.250 4.52 | 5.75 2.26
1.333 3.39 | 2.833 61.02 | 4.333 4.52 | 5.83 2.26
1.417 3.39 | 2.917 88.14 | 4.417 4.52 | 5.92 2.26
1.500 3.39 | 3.000 88.14 | 4.500 4.52 | 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 151.56
over (min) 5.00 15.00
Storage Coeff. (min)= 3.13 (ii) 10.49 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.09

PEAK FLOW (cms)= 0.30 0.15 0.432 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 50.50 34.18 42.34
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.60 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----CALIB
| STANDHYD (0624) | Area (ha)= 0.89
| ID= 1 DT= 5.0 min | Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.69 0.20
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 77.03 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 | 1.583 5.65 | 3.083 12.43 | 4.58 3.39
0.167 2.26 | 1.667 5.65 | 3.167 12.43 | 4.67 3.39
0.250 2.26 | 1.750 5.65 | 3.250 12.43 | 4.75 3.39
0.333 2.26 | 1.833 5.65 | 3.333 12.43 | 4.83 3.39
0.417 2.26 | 1.917 5.65 | 3.417 12.43 | 4.92 3.39
0.500 2.26 | 2.000 5.65 | 3.500 12.43 | 5.00 3.39

Max.Eff.Inten.(mm/hr)= 88.14 34.84
over (min) 5.00 20.00
Storage Coeff. (min)= 2.30 (ii) 15.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.30 0.07

PEAK FLOW (cms)= 0.17 0.01 0.177 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 20.24 43.83
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

-----ADD HYD (0286)-----
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6102): 2.49 0.432 3.00 42.34
+ ID2= 2 (0616): 0.44 0.088 3.00 43.82
=====ID = 3 (0286): 2.93 0.519 3.00 42.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

-----ADD HYD (0286)-----
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.

(ha) (cms) (hrs) (mm)
ID1= 3 (0286): 2.93 0.519 3.00 42.56
+ ID2= 2 (0624): 0.89 0.177 3.00 43.83

ID = 1 (0286): 3.82 0.696 3.00 42.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| RESERVOIR(0305)| OVERFLOW IS OFF
| IN= 2----> OUT= 1 |
DT= 5.0 min
OUTFLOW	STORAGE	OUTFLOW	STORAGE
(cms)	(ha.m.)	(cms)	(ha.m.)
0.0000	0.0000	0.1760	0.2330
0.0280	0.0927	0.0000	0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0286) 3.820 0.696 3.00 42.86
OUTFLOW: ID= 1 (0305) 3.820 0.056 4.00 42.64

PEAK FLOW REDUCTION [Qout/Qin](%)= 8.07
TIME SHIFT OF PEAK FLOW (min)= 60.00
MAXIMUM STORAGE USED (ha.m.)= 0.1195

| CALIB |
| STANDHYD (0619)| Area (ha)= 1.64
| ID= 1 DT= 5.0 min | Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.07 0.57
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 104.56 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr ' hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39

0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 40.77
over (min) 5.00 20.00
Storage Coeff. (min)= 2.76 (ii) 15.20 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07

PEAK FLOW (cms)= 0.26 0.04 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.17 0.285 (iii)
RUNOFF VOLUME (mm)= 50.50 23.40 41.01
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.41 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0293)|
1 + 2 = 3
ID1= 1 (0302): 15.05 0.207 4.00 36.36
+ ID2= 2 (0304): 5.42 0.162 3.08 43.71

ID = 3 (0293): 20.47 0.324 3.58 38.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0293)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.

(ha) (cms) (hrs) (mm)
ID1= 3 (0293): 20.47 0.324 3.58 38.31
+ ID2= 2 (0305): 3.82 0.056 4.00 42.64

ID = 1 (0293): 24.29 0.378 3.58 38.99

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0293)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0293): 24.29 0.378 3.58 38.99
+ ID2= 2 (0619): 1.64 0.285 3.00 41.01

ID = 3 (0293): 25.93 0.542 3.00 39.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (6032)| Area (ha)= 29.63
| ID= 1 DT= 5.0 min | Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 13.93 15.70
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.45 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr ' hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26

1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 43.25
over (min) 5.00 20.00
Storage Coeff. (min)= 6.58 (ii) 18.73 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

PEAK FLOW (cms)= 2.12 1.02 2.798 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 55.00 19.85 31.10
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.97 0.35 0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0128)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0293): 25.93 0.542 3.00 39.12
+ ID2= 2 (0603): 111.60 1.061 4.67 13.52

ID = 3 (0128): 137.53 1.413 4.50 18.34

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0128)|
| 3 + 2 = 1 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0128): 137.53 1.413 4.50 18.34
+ ID2= 2 (0032): 29.63 2.798 3.00 31.10

ID = 1 (0128): 167.16 3.648 3.00 20.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (1414.9) -----

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700 Main Channel
166.55	83.78	0.0700 Main Channel
168.05	84.78	0.0700 / 0.1100 Main Channel
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

Storage Coeff. (min)= 6.17 (ii) 15.95 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.07

TOTALS
PEAK FLOW (cms)= 3.75 0.55 4.133 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 26.16 42.95
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.46 0.76

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0604):	167.16	1.389	4.50	20.60
+ ID2= 2 (6042):	24.00	4.133	3.00	42.95

ID = 3 (0130):	191.16	5.282	3.00	23.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (801.4) -----

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700 Main Channel
258.15	80.95	0.0700 Main Channel
259.65	81.95	0.0700 / 0.1100 Main Channel

hydrograph
AREA QPEAK TPEAK R.V. <-pipe / channel->
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0128) 167.16 3.65 3.00 20.61 2.16 0.09
OUTFLOW: ID= 1 (0604) 167.16 1.39 4.50 20.60 1.69 0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min
Area (ha)= 24.00
Total Imp(%)= 78.00 Dir. Conn.(%)= 69.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 18.72 5.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 400.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 74.55
over (min) 5.00 20.00

263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

hydrograph
AREA QPEAK TPEAK R.V. <-pipe / channel->
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0130) 191.16 5.28 3.00 23.41 1.00 0.33
OUTFLOW: ID= 1 (0605) 191.16 2.17 3.50 23.40 0.84 0.27

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min
Area (ha)= 11.40
Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.21 3.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 52.52
over (min) 5.00 20.00
Storage Coeff. (min)= 4.94 (ii) 16.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS
PEAK FLOW (cms)= 1.65 0.27 1.835 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 22.66 39.92
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.40 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0139)|

1 + 2 = 3	AREA (ha)	OPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0605):	191.16	2.166	3.50	23.40
+ ID2= 2 (6112):	11.40	1.835	3.00	39.92
=====				
ID = 3 (0139):	202.56	3.490	3.00	24.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	15.90	Dir. Conn.(%)=	65.00
STANDHYD (6052)	Total Imp(%)=	74.00		
ID= 1 DT= 5.0 min				

Surface Area	(ha)=	11.77	4.13	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	325.58	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 39.13
over (min) 5.00 20.00
Storage Coeff. (min)= 5.46 (ii) 18.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00

Unit Hyd. peak (cms)= 0.20 0.06

TOTALS
PEAK FLOW (cms)= 2.38 0.25 2.545 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 17.30 38.88
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.31 0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0132)|

1 + 2 = 3	AREA (ha)	OPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0139):	202.56	3.490	3.00	24.33
+ ID2= 2 (6052):	15.90	2.545	3.00	38.88
=====				
ID = 3 (0132):	218.46	6.035	3.00	25.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0530)|

| IN= 2--> OUT= 1 | Routing time step (min)= 5.00

<----- DATA FOR SECTION (350.0) ----->

Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 / 0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 / 0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	

149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

		<---- hydrograph ---->				<- pipe / channel ->	
		AREA (ha)	OPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0132)	218.46	6.04	3.00	25.39	0.66	0.68	
OUTFLOW: ID= 1 (0530)	218.46	4.69	3.08	25.39	0.59	0.65	

CALIB	Area (ha)=	5.80	Dir. Conn.(%)=	56.00
STANDHYD (5302)	Total Imp(%)=	66.00		
ID= 1 DT= 5.0 min				

Surface Area	(ha)=	3.83	1.97	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	196.64	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 36.34
over (min) 5.00 20.00
Storage Coeff. (min)= 4.03 (ii) 17.06 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.06

PEAK FLOW (cms)= 0.77 0.11 0.847 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 16.72 35.64
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)

ID1= 1 (0530): 218.46 4.691 3.08 25.39
+ ID2= 2 (5302): 5.80 0.847 3.00 35.64
=====

ID = 3 (0134): 224.26 5.164 3.00 25.66

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	273.94	9.731	3.00	27.39
+ ID2= 2 (0134):	224.26	5.164	3.00	25.66
ID = 3 (0135):	498.20	14.895	3.00	26.61

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	Routing time step (min)'= 5.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10

0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.20	14.89	3.00	26.61	1.89
OUTFLOW: ID= 1 (0507)	498.20	11.05	3.17	26.61	0.79

CALIB	Area (ha)= 48.90
STANDHYD (5072)	Total Imp(%)= 50.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)= 36.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)= 24.45	24.45
Dep. Storage (mm)= 6.00	8.00
Average Slope (%)= 1.00	1.00
Length (m)= 570.96	40.00
Mannings n = 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0507):	498.20	11.050	3.17	26.61
+ ID2= 2 (5072):	48.90	4.659	3.00	31.65
ID = 3 (0122):	547.10	14.997	3.08	27.06

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 9.40
STANDHYD (5402)	

|ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.70 4.70
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 250.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 36.65
over (min) 5.00 20.00
Storage Coeff. (min)= 4.66 (ii) 17.64 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

PEAK FLOW (cms)= 0.77 0.26
TIME TO PEAK (hrs)= 3.00 3.25
RUNOFF VOLUME (mm)= 50.50 16.79
TOTAL RAINFALL (mm)= 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30

TOTALS
0.947 (iii)

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| STORE HYD(1505)| AREA (ha)= 30.00
| ID= 1 DT= 5.0min | QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 402.14

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18

3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17

7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.1

11.42	0.00	42.75	0.25	74.08	0.57	105.42	0.16	136.75	0.15
11.50	0.00	42.83	0.26	74.17	0.56	105.50	0.16	136.83	0.14
11.58	0.00	42.92	0.25	74.25	0.58	105.58	0.16	136.92	0.14
11.67	0.00	43.00	0.25	74.33	0.58	105.67	0.16	137.00	0.14
11.75	0.00	43.08	0.25	74.42	0.58	105.75	0.17	137.08	0.15
11.83	0.00	43.17	0.25	74.50	0.59	105.83	0.16	137.17	0.14
11.92	0.00	43.25	0.25	74.58	0.60	105.92	0.16	137.25	0.15
12.00	0.00	43.33	0.25	74.67	0.57	106.00	0.16	137.33	0.15
12.08	0.00	43.42	0.25	74.75	0.56	106.08	0.16	137.42	0.14
12.17	0.00	43.50	0.25	74.83	0.54	106.17	0.16	137.50	0.14
12.25	0.00	43.58	0.25	74.92	0.56	106.25	0.17	137.58	0.14
12.33	0.00	43.67	0.25	75.00	0.53	106.33	0.16	137.67	0.15
12.42	0.00	43.75	0.25	75.08	0.51	106.42	0.16	137.75	0.14
12.50	0.00	43.83	0.26	75.17	0.51	106.50	0.16	137.83	0.14
12.58	0.00	43.92	0.26	75.25	0.51	106.58	0.16	137.92	0.14
12.67	0.00	44.00	0.26	75.33	0.51	106.67	0.16	138.00	0.14
12.75	0.00	44.08	0.26	75.42	0.50	106.75	0.16	138.08	0.14
12.83	0.00	44.17	0.26	75.50	0.50	106.83	0.15	138.17	0.14
12.92	0.00	44.25	0.27	75.58	0.49	106.92	0.15	138.25	0.14
13.00	0.00	44.33	0.26	75.67	0.49	107.00	0.16	138.33	0.14
13.08	0.00	44.42	0.26	75.75	0.49	107.08	0.16	138.42	0.14
13.17	0.00	44.50	0.26	75.83	0.48	107.17	0.16	138.50	0.14
13.25	0.00	44.58	0.26	75.92	0.47	107.25	0.15	138.58	0.14
13.33	0.00	44.67	0.26	76.00	0.47	107.33	0.16	138.67	0.14
13.42	0.00	44.75	0.26	76.08	0.48	107.42	0.16	138.75	0.14
13.50	0.00	44.83	0.26	76.17	0.46	107.50	0.15	138.83	0.14
13.58	0.00	44.92	0.26	76.25	0.45	107.58	0.16	138.92	0.14
13.67	0.00	45.00	0.26	76.33	0.45	107.67	0.15	139.00	0.14
13.75	0.00	45.08	0.26	76.42	0.43	107.75	0.15	139.08	0.14
13.83	0.00	45.17	0.25	76.50	0.44	107.83	0.16	139.17	0.13
13.92	0.00	45.25	0.25	76.58	0.46	107.92	0.16	139.25	0.14
14.00	0.00	45.33	0.25	76.67	0.43	108.00	0.16	139.33	0.14
14.08	0.00	45.42	0.25	76.75	0.44	108.08	0.15	139.42	0.14
14.17	0.00	45.50	0.25	76.83	0.43	108.17	0.15	139.50	0.14
14.25	0.00	45.58	0.25	76.92	0.45	108.25	0.15	139.58	0.13
14.33	0.00	45.67	0.25	77.00	0.42	108.33	0.16	139.67	0.14
14.42	0.00	45.75	0.25	77.08	0.43	108.42	0.16	139.75	0.14
14.50	0.00	45.83	0.26	77.17	0.43	108.50	0.15	139.83	0.13
14.58	0.00	45.92	0.25	77.25	0.42	108.58	0.15	139.92	0.14
14.67	0.00	46.00	0.26	77.33	0.41	108.67	0.15	140.00	0.14
14.75	0.00	46.08	0.26	77.42	0.43	108.75	0.16	140.08	0.13
14.83	0.00	46.17	0.25	77.50	0.41	108.83	0.15	140.17	0.13
14.92	0.69	46.25	0.26	77.58	0.43	108.92	0.15	140.25	0.13
15.00	0.69	46.33	0.26	77.67	0.39	109.00	0.15	140.33	0.13
15.08	0.71	46.42	0.26	77.75	0.39	109.08	0.15	140.42	0.14
15.17	0.74	46.50	0.26	77.83	0.37	109.17	0.15	140.50	0.13
15.25	0.74	46.58	0.26	77.92	0.39	109.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13

15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12

19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.1		

28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

| STORE HYD(1605)| AREA (ha)= 30.00
| ID= 1 DT= 5.0min| QPEAK (cms)= 1.37
----- TPEAK (hrs)= 71.92
VOLUME (mm)= 625.27

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20

0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27

4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26

12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16

16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14

21.00	0.49	52.35	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.15	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12

25.15	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.27	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11

29.33 0.17 60.58 0.44 91.83 0.40 123.08 0.18 154.33 0.11
29.42 0.17 60.67 0.44 91.92 0.40 123.17 0.18 154.42 0.11
29.50 0.17 60.75 0.43 92.00 0.40 123.25 0.18 154.50 0.11
29.58 0.17 60.83 0.43 92.08 0.40 123.33 0.18 154.58 0.11
29.67 0.17 60.92 0.42 92.17 0.40 123.42 0.18 154.67 0.11
29.75 0.17 61.00 0.42 92.25 0.39 123.50 0.18 154.75 0.11
29.83 0.17 61.08 0.42 92.33 0.39 123.58 0.18 154.83 0.11
29.92 0.16 61.17 0.42 92.42 0.39 123.67 0.18 154.92 0.11
30.00 0.16 61.25 0.41 92.50 0.39 123.75 0.18 155.00 0.11
30.08 0.16 61.33 0.41 92.58 0.38 123.83 0.18 155.08 0.11
30.17 0.16 61.42 0.40 92.67 0.38 123.92 0.18 155.17 0.11
30.25 0.16 61.50 0.40 92.75 0.38 124.00 0.18 155.25 0.11
30.33 0.16 61.58 0.40 92.83 0.38 124.08 0.18 155.33 0.11
30.42 0.16 61.67 0.40 92.92 0.38 124.17 0.18 155.42 0.11
30.50 0.16 61.75 0.39 93.00 0.37 124.25 0.18 155.50 0.11
30.58 0.16 61.83 0.39 93.08 0.37 124.33 0.19 155.58 0.11
30.67 0.16 61.92 0.39 93.17 0.37 124.42 0.19 155.67 0.11
30.75 0.16 62.00 0.38 93.25 0.37 124.50 0.19 155.75 0.11
30.83 0.15 62.08 0.38 93.33 0.37 124.58 0.19 155.83 0.10
30.92 0.15 62.17 0.38 93.42 0.37 124.67 0.20 155.92 0.11
31.00 0.15 62.25 0.38 93.50 0.37 124.75 0.20 156.00 0.10
31.08 0.15 62.33 0.39 93.58 0.37 124.83 0.20
31.17 0.15 62.42 0.39 93.67 0.37 124.92 0.20

=====

V V I SSSS U U A L (v 6.2.2018)
V V I SS U U A A L
V V I SS U U AAAAA L
V V I SS U U A A L
W V I SSSS UUUU A A LLLL

000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y Y M M O O
000 T T H H Y M M 000

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\5fc1d607-0661-472f-bc18-22ab67700107\

Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\5fc1d607-0661-472f-bc18-22ab67700107\

DATE: 04-10-2024 TIME: 01:42:46

USER:

COMMENTS: _____

** SIMULATION : CHI4HR5M025.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\fc287717-ea81-4509-917c-0fddd7b9a7f0\8e2d92a
Ptotal= 24.78 mm Comments: CHI4HR5M025.stm

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	0.89	1.00	1.83	2.00	34.69	3.00	2.83
0.08	0.93	1.08	2.02	2.08	19.59	3.08	2.62
0.17	0.97	1.17	2.25	2.17	13.23	3.17	2.44
0.25	1.01	1.25	2.54	2.25	9.84	3.25	2.29
0.33	1.07	1.33	2.93	2.33	7.78	3.33	2.15
0.42	1.12	1.42	3.47	2.42	6.41	3.42	2.03
0.50	1.19	1.50	4.24	2.50	5.43	3.50	1.92
0.58	1.26	1.58	5.46	2.58	4.71	3.58	1.83
0.67	1.34	1.67	7.61	2.67	4.16	3.67	1.74
0.75	1.43	1.75	12.29	2.75	3.72	3.75	1.66
0.83	1.54	1.83	28.03	2.83	3.37	3.83	1.59
0.92	1.67	1.92	71.13	2.92	3.07		

CALIB
NASHYD (5011)
ID= 1 DT= 5.0 min
Area (ha)= 80.20 Curve Number (CN)= 65.0
Ia (mm)= 8.00 # of Linear Res. (N)= 3.00
U.H. Tp(hrs)= 0.85

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 0.185 (i)
TIME TO PEAK (hrs)= 3.250
RUNOFF VOLUME (mm)= 1.833
TOTAL RAINFALL (mm)= 24.775
RUNOFF COEFFICIENT = 0.074

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 37.32
Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.18 23.14
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 498.80 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 52.91 3.40
over (min) 10.00 45.00
Storage Coeff. (min)= 8.64 (ii) 42.26 (ii)
Unit Hyd. Tpeak (min)= 10.00 45.00
Unit Hyd. peak (cms)= 0.12 0.03

PEAK FLOW (cms)= 0.87 0.11 *TOTALS*
TIME TO PEAK (hrs)= 2.08 2.92 0.878 (iii)
RUNOFF VOLUME (mm)= 18.78 2.57 6.45
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.10 0.26

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3
ID1= 1 (5011): 80.20 0.185 3.25 1.83
+ ID2= 2 (5012): 37.32 0.878 2.08 6.45

ID = 3 (0100): 117.52 0.885 2.08 3.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2--> OUT= 1
Routing time step (min)'= 5.00

DATA FOR SECTION (1537.5)
Distance Elevation Manning
0.00 89.30 0.1100
4.20 89.28 0.1100
9.03 88.80 0.1100
21.55 88.78 0.1100
29.06 88.24 0.1100
39.87 87.83 0.1100
55.54 87.84 0.1100 /0.0700 Main Channel
57.54 86.84 0.0700 Main Channel
59.04 86.84 0.0700 Main Channel
61.04 87.84 0.0700 /0.1100 Main Channel
74.10 87.86 0.1100
87.72 88.07 0.1100
101.34 88.18 0.1100
113.53 88.23 0.1100
128.57 88.32 0.1100
142.19 88.61 0.1100
155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.10 86.94 .202E+03 0.0 0.25 78.80
0.20 87.04 .452E+03 0.1 0.37 52.91
0.30 87.14 .749E+03 0.3 0.47 42.34
0.40 87.24 .109E+04 0.5 0.55 36.26
0.50 87.34 .149E+04 0.8 0.62 32.18
0.60 87.44 .193E+04 1.1 0.68 29.19
0.70 87.54 .241E+04 1.5 0.74 26.87
0.80 87.64 .295E+04 2.0 0.79 25.01
0.90 87.74 .353E+04 2.5 0.84 23.46
1.00 87.84 .421E+04 3.1 0.89 22.39
1.10 87.94 .494E+04 4.5 0.63 31.56
1.21 88.05 .150E+05 7.1 0.56 35.43
1.33 88.17 .233E+05 10.6 0.54 36.49
1.44 88.28 .346E+05 15.5 0.53 37.18
1.56 88.40 .484E+05 22.8 0.56 35.35

1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

			<--- hydrograph --->			<-pipe / channel->		
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL		
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)		
INFLOW : ID= 2 (	0100)	117.52	0.89	2.08	3.30	0.53	0.64	
OUTFLOW: ID= 1 (	0502)	117.52	0.37	3.00	3.30	0.34	0.49	

CALIB								
NASHYD (5691)	Area (ha)=	2.30	Curve Number (CN)=	69.3				
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00				
	U.H. Tp(hrs)=	0.07						

Unit Hyd Qpeak (cms)= 1.220

PEAK FLOW (cms)=	0.019 (i)
TIME TO PEAK (hrs)=	2.083
RUNOFF VOLUME (mm)=	2.001
TOTAL RAINFALL (mm)=	24.775
RUNOFF COEFFICIENT	= 0.081

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB								
NASHYD (5021)	Area (ha)=	3.67	Curve Number (CN)=	68.8				
ID= 1 DT= 5.0 min	Ia (mm)=	8.00	# of Linear Res.(N)=	3.00				
	U.H. Tp(hrs)=	0.43						

Unit Hyd Qpeak (cms)= 0.328

PEAK FLOW (cms)=	0.015 (i)
TIME TO PEAK (hrs)=	2.667
RUNOFF VOLUME (mm)=	2.136
TOTAL RAINFALL (mm)=	24.775
RUNOFF COEFFICIENT	= 0.086

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	

STANDHYD (5092)	Area (ha)=	1.73			
ID= 1 DT= 5.0 min	Total Imp(%)=	50.60	Dir. Conn.(%)=	50.60	

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.88	0.85	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	107.39	40.00	
Mannings n	= 0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	4.05	
over (min)	5.00	35.00	
Storage Coeff. (min)=	3.06 (ii)	34.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.27	0.03	

TOTALS

PEAK FLOW (cms)=	0.15	0.01	0.145 (iii)
TIME TO PEAK (hrs)=	2.00	2.75	2.00
RUNOFF VOLUME (mm)=	18.78	3.83	11.38
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT	= 0.76	0.15	0.46

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB								
STANDHYD (5082)	Area (ha)=	0.71						
ID= 1 DT= 5.0 min	Total Imp(%)=	73.00	Dir. Conn.(%)=	64.00				

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.52	0.19	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	68.80	40.00	
Mannings n	= 0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	3.88	
over (min)	5.00	35.00	
Storage Coeff. (min)=	2.34 (ii)	34.21 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.30	0.03	

TOTALS

PEAK FLOW (cms)=	0.08	0.00	0.081 (iii)

TIME TO PEAK (hrs)=	2.00	2.67	2.00
RUNOFF VOLUME (mm)=	18.78	2.67	12.95
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT	= 0.76	0.11	0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.7 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB								
STANDHYD (5682)	Area (ha)=	0.53						
ID= 1 DT= 5.0 min	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00				

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.34	0.19	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	59.44	40.00	
Mannings n	= 0.013	0.250	

Max.Eff.Inten.(mm/hr)=	71.13	1.53	
over (min)	5.00	50.00	
Storage Coeff. (min)=	2.14 (ii)	48.39 (ii)	
Unit Hyd. Tpeak (min)=	5.00	50.00	
Unit Hyd. peak (cms)=	0.31	0.02	

TOTALS

PEAK FLOW (cms)=	0.06	0.00	0.063 (iii)
TIME TO PEAK (hrs)=	2.00	3.08	2.00
RUNOFF VOLUME (mm)=	18.78	1.80	12.78
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT	= 0.76	0.07	0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB								
STANDHYD (0501)	Area (ha)=	6.23						

ID= 1 DT= 5.0 min	Total Imp(%)=	42.00	Dir. Conn.(%)=	42.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.62	3.61	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	203.80	40.00	
Mannings n	= 0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	1.14	
over (min)	5.00	60.00	
Storage Coeff. (min)=	4.49 (ii)	56.43 (ii)	
Unit Hyd. Tpeak (min)=	5.00	60.00	
Unit Hyd. peak (cms)=	0.23	0.02	

TOTALS

PEAK FLOW (cms)=	0.37	0.01	0.372 (iii)
TIME TO PEAK (hrs)=	2.00	3.25	2.00
RUNOFF VOLUME (mm)=	18.78	1.42	8.71
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT	= 0.76	0.06	0.35

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 58.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB								
STANDHYD (0510)	Area (ha)=	0.76						
ID= 1 DT= 5.0 min	Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00				

		IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	0.59	0.17	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	71.18	40.00	
Mannings n	= 0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	4.05	
over (min)	5.00	35.00	
Storage Coeff. (min)=	2.39 (ii)	33.73 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.30	0.03	

TOTALS

PEAK FLOW (cms)=	0.11	0.00	0.105 (iii)
TIME TO PEAK (hrs)=	2.00	2.75	2.00

RUNOFF VOLUME (mm)= 18.78 3.83 15.46
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.15 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 81.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5752)
ID= 1 DT= 5.0 min

Area (ha)= 0.78
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.51 0.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 72.11 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 3.11
over (min) 5.00 40.00
Storage Coeff. (min)= 2.41 (ii) 37.25 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.30 0.03

PEAK FLOW (cms)= 0.09 0.00 *TOTALS*
TIME TO PEAK (hrs)= 2.00 2.83 0.090 (iii)
RUNOFF VOLUME (mm)= 18.78 2.98 13.22
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.12 0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.6 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5282)
ID= 1 DT= 5.0 min

Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 10.61 0.453 2.00 6.72
+ ID2= 2 (5092): 1.73 0.145 2.00 11.38
ID = 3 (0481): 12.34 0.599 2.00 7.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 12.34 0.599 2.00 7.37
+ ID2= 2 (0510): 0.76 0.105 2.00 15.46
ID = 1 (0481): 13.10 0.704 2.00 7.84

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 13.10 0.704 2.00 7.84
+ ID2= 2 (5282): 2.08 0.220 2.00 13.56
ID = 3 (0481): 15.18 0.924 2.00 8.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 15.18 0.924 2.00 8.62
+ ID2= 2 (5682): 0.53 0.063 2.00 12.78
ID = 1 (0481): 15.71 0.987 2.00 8.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 4.12
over (min) 5.00 35.00
Storage Coeff. (min)= 3.23 (ii) 34.35 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.27 0.03

PEAK FLOW (cms)= 0.22 0.00 *TOTALS*
TIME TO PEAK (hrs)= 2.00 2.75 0.220 (iii)
RUNOFF VOLUME (mm)= 18.78 3.89 13.56
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.16 0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 82.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0481)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0501): 6.23 0.372 2.00 8.71
+ ID2= 2 (5021): 3.67 0.015 2.67 2.14
ID = 3 (0481): 9.90 0.372 2.00 6.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 9.90 0.372 2.00 6.27
+ ID2= 2 (5082): 0.71 0.081 2.00 12.95
ID = 1 (0481): 10.61 0.453 2.00 6.72

ADD HYD (0481)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0481): 15.71 0.987 2.00 8.76
+ ID2= 2 (5691): 2.30 0.019 2.00 2.00
ID = 3 (0481): 18.01 0.997 2.00 7.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0481)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0481): 18.01 0.997 2.00 7.90
+ ID2= 2 (5752): 0.78 0.090 2.00 13.22
ID = 1 (0481): 18.79 1.087 2.00 8.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (0524)
ID= 1 DT= 5.0 min

Area (ha)= 7.22 Curve Number (CN)= 80.7
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.20

Unit Hyd Qpeak (cms)= 1.393

PEAK FLOW (cms)= 0.075 (i)
TIME TO PEAK (hrs)= 2.333
RUNOFF VOLUME (mm)= 3.616
TOTAL RAINFALL (mm)= 24.775
RUNOFF COEFFICIENT = 0.146

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
NASHYD (0522)
ID= 1 DT= 5.0 min

Area (ha)= 3.31 Curve Number (CN)= 63.1
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.16

Unit Hyd Qpeak (cms)= 0.800

PEAK FLOW (cms)= 0.017 (i)
TIME TO PEAK (hrs)= 2.250
RUNOFF VOLUME (mm)= 1.692
TOTAL RAINFALL (mm)= 24.775
RUNOFF COEFFICIENT = 0.068

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0580)
ID= 1 DT= 5.0 min
Area (ha)= 1.87
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.22 0.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 111.65 40.00
Mannings n = 0.013 0.250
Max.Eff.Inten.(mm/hr)= 71.13 1.53
over (min) 5.00 50.00
Storage Coeff. (min)= 3.13 (ii) 49.37 (ii)
Unit Hyd. Tpeak (min)= 5.00 50.00
Unit Hyd. peak (cms)= 0.27 0.02
TOTALS
PEAK FLOW (cms)= 0.20 0.00 0.200 (iii)
TIME TO PEAK (hrs)= 2.00 3.08 2.00
RUNOFF VOLUME (mm)= 18.78 1.80 12.82
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.07 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 64.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0519)
ID= 1 DT= 5.0 min
Area (ha)= 2.08
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.35 0.73
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 117.76 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 1.44
over (min) 5.00 55.00
Storage Coeff. (min)= 3.23 (ii) 50.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 55.00
Unit Hyd. peak (cms)= 0.27 0.02

TOTALS
PEAK FLOW (cms)= 0.22 0.00 0.220 (iii)
TIME TO PEAK (hrs)= 2.00 3.17 2.00
RUNOFF VOLUME (mm)= 18.78 1.70 12.78
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.07 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0529)
ID= 1 DT= 5.0 min
Area (ha)= 1.80
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.40 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 109.54 40.00
Mannings n = 0.013 0.250
Max.Eff.Inten.(mm/hr)= 71.13 1.44
over (min) 5.00 55.00
Storage Coeff. (min)= 3.09 (ii) 50.42 (ii)
Unit Hyd. Tpeak (min)= 5.00 55.00
Unit Hyd. peak (cms)= 0.27 0.02

TOTALS
PEAK FLOW (cms)= 0.23 0.00 0.232 (iii)
TIME TO PEAK (hrs)= 2.00 3.17 2.00
RUNOFF VOLUME (mm)= 18.78 1.70 15.00
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.07 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0267)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0519): 2.08 0.220 2.00 12.78
+ ID2= 2 (0529): 1.80 0.232 2.00 15.00
=====

ID = 3 (0267): 3.88 0.452 2.00 13.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0267)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0267): 3.88 0.452 2.00 13.81
+ ID2= 2 (0580): 1.87 0.200 2.00 12.82
=====

ID = 1 (0267): 5.75 0.651 2.00 13.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0265)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0267): 5.75 0.651 2.00 13.49
+ ID2= 2 (0522): 3.31 0.017 2.25 1.69
=====

ID = 3 (0265): 9.06 0.655 2.00 9.18

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0523)
ID= 1 DT= 5.0 min
Area (ha)= 6.61
Total Imp(%)= 75.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 4.96 1.65
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 209.92 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 13.92
over (min) 5.00 25.00
Storage Coeff. (min)= 4.57 (ii) 23.69 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.23 0.05

TOTALS
PEAK FLOW (cms)= 0.47 0.03 0.469 (iii)
TIME TO PEAK (hrs)= 2.00 2.50 2.00
RUNOFF VOLUME (mm)= 18.78 4.53 11.65
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.18 0.47

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0260)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0265): 9.06 0.655 2.00 9.18
+ ID2= 2 (0523): 6.61 0.469 2.00 11.65
=====

ID = 3 (0260): 15.67 1.124 2.00 10.22

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0525)
ID= 1 DT= 5.0 min
Area (ha)= 1.45
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.94 0.51
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 98.32 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 2.84
over (min) 5.00 40.00
Storage Coeff. (min)= 2.90 (ii) 39.03 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.28 0.03

PEAK FLOW (cms)= 0.16 0.00 0.159 (iii)
TIME TO PEAK (hrs)= 2.00 2.83 2.00
RUNOFF VOLUME (mm)= 18.78 2.91 13.21
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.12 0.53

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0272)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0260): 15.67 1.124 2.00 10.22
+ ID2= 2 (0525): 1.45 0.159 2.00 13.21
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0264)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0272): 17.12 1.283 2.00 10.48
+ ID2= 2 (0524): 7.22 0.075 2.33 3.62
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0527)
ID= 1 DT= 5.0 min
Area (ha)= 1.68
Total Imp(%)= 76.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.28 0.40
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 105.83 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 29.61
over (min) 5.00 20.00
Storage Coeff. (min)= 3.03 (ii) 17.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.27 0.06

PEAK FLOW (cms)= 0.15 0.02 0.148 (iii)
TIME TO PEAK (hrs)= 2.00 2.33 2.00
RUNOFF VOLUME (mm)= 18.78 7.97 13.58
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.32 0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.2 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0270)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0264): 24.34 1.296 2.00 8.44
+ ID2= 2 (0527): 1.68 0.148 2.00 13.58
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min
Area (ha)= 2.27
Total Imp(%)= 61.00 Dir. Conn.(%)= 61.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.38 0.89
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 123.02 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 3.38
over (min) 5.00 40.00
Storage Coeff. (min)= 3.32 (ii) 37.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.26 0.03

PEAK FLOW (cms)= 0.22 0.00 0.223 (iii)
TIME TO PEAK (hrs)= 2.00 2.83 2.00
RUNOFF VOLUME (mm)= 18.78 3.23 12.70
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.13 0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.3 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0273)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0270): 26.02 1.444 2.00 8.77
+ ID2= 2 (5202): 2.27 0.223 2.00 12.70
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0274)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.1400 0.8343
0.0195 0.2416 0.2360 1.0014
0.0700 0.5564 0.3420 1.6616

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0273) 28.290 1.667 2.00 9.09
OUTFLOW: ID= 1 (0274) 28.290 0.020 4.17 8.98

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.17
TIME SHIFT OF PEAK FLOW (min)=130.00
MAXIMUM STORAGE USED (ha.m.)= 0.2416

CALIB
STANDHYD (0526)
ID= 1 DT= 5.0 min
Area (ha)= 0.94
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 0.73 0.21
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 79.16 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 3.40
over (min) 5.00 40.00
Storage Coeff. (min)= 2.54 (ii) 36.16 (ii)
Unit Hyd. Tpeak (min)= 5.00 40.00
Unit Hyd. peak (cms)= 0.29 0.03

PEAK FLOW (cms)= 0.13 0.00 0.128 (iii)
TIME TO PEAK (hrs)= 2.00 2.83 2.00
RUNOFF VOLUME (mm)= 18.78 3.24 15.33
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.13 0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.4 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0279)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.0476 0.0432
0.0096 0.0220 0.0579 0.0480
0.0206 0.0306 0.0671 0.0528
0.0297 0.0360 0.0000 0.0000

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

INFLOW : ID= 2 (0526) 0.940 0.128 2.00 15.33
OUTFLOW: ID= 1 (0279) 0.940 0.005 3.50 14.72

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.82
TIME SHIFT OF PEAK FLOW (min)= 90.00
MAXIMUM STORAGE USED (ha.m.)= 0.0112

CALIB
STANDHYD (0574)
ID= 1 DT= 5.0 min
Area (ha)= 1.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.12 0.32
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 97.98 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 2.31
over (min) 5.00 45.00
Storage Coeff. (min)= 2.89 (ii) 42.12 (ii)
Unit Hyd. Tpeak (min)= 5.00 45.00
Unit Hyd. peak (cms)= 0.28 0.03

PEAK FLOW (cms)= 0.19 0.00 *TOTALS*
TIME TO PEAK (hrs)= 2.00 2.92 2.00 (iii)
RUNOFF VOLUME (mm)= 18.78 2.39 15.15
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.10 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.5 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0276)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.0730 0.0642
0.0150 0.0327 0.0890 0.0712
0.0310 0.0455 0.1030 0.0784
0.0450 0.0536 0.0000 0.0000

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0572)
ID= 1 DT= 5.0 min
Area (ha)= 11.31
Total Imp(%)= 71.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.03 3.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 274.59 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 16.43
over (min) 5.00 25.00
Storage Coeff. (min)= 5.37 (ii) 23.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.21 0.05

PEAK FLOW (cms)= 0.73 0.08 *TOTALS*
TIME TO PEAK (hrs)= 2.00 2.50 2.00 (iii)
RUNOFF VOLUME (mm)= 18.78 6.09 12.43
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.25 0.50

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 76.1 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0282)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0571): 19.59 1.162 2.00 11.10
+ ID2= 2 (0572): 11.31 0.742 2.00 12.43
ID = 3 (0282): 30.90 1.904 2.00 11.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
INFLOW : ID= 2 (0574) 1.440 0.189 2.00 15.15
OUTFLOW: ID= 1 (0276) 1.440 0.008 3.42 14.77

PEAK FLOW REDUCTION [Qout/Qin](%)= 4.07
TIME SHIFT OF PEAK FLOW (min)= 85.00
MAXIMUM STORAGE USED (ha.m.)= 0.0168

ADD HYD (0275)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0276): 1.44 0.008 3.42 14.77
+ ID2= 2 (0279): 0.94 0.005 3.50 14.72
ID = 3 (0275): 2.38 0.013 3.50 14.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (0571)
ID= 1 DT= 5.0 min
Area (ha)= 19.59
Total Imp(%)= 68.00 Dir. Conn.(%)= 50.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 13.32 6.27
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 361.39 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 7.16
over (min) 5.00 35.00
Storage Coeff. (min)= 6.33 (ii) 31.27 (ii)
Unit Hyd. Tpeak (min)= 5.00 35.00
Unit Hyd. peak (cms)= 0.19 0.03

PEAK FLOW (cms)= 1.16 0.06 *TOTALS*
TIME TO PEAK (hrs)= 2.00 2.67 2.00 (iii)
RUNOFF VOLUME (mm)= 18.78 3.43 11.10
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.14 0.45

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.6 Ia = Dep. Storage (Above)

CALIB
STANDHYD (0573)
ID= 1 DT= 5.0 min
Area (ha)= 2.66
Total Imp(%)= 60.00 Dir. Conn.(%)= 60.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.60 1.06
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 133.17 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 71.13 2.67
over (min) 5.00 45.00
Storage Coeff. (min)= 3.48 (ii) 40.49 (ii)
Unit Hyd. Tpeak (min)= 5.00 45.00
Unit Hyd. peak (cms)= 0.26 0.03

PEAK FLOW (cms)= 0.25 0.00 *TOTALS*
TIME TO PEAK (hrs)= 2.00 2.92 2.00 (iii)
RUNOFF VOLUME (mm)= 18.78 2.75 12.36
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.11 0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.8 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0285)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0282): 30.90 1.904 2.00 11.59
+ ID2= 2 (0573): 2.66 0.253 2.00 12.36
ID = 3 (0285): 33.56 2.156 2.00 11.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0280)
IN= 2----> OUT= 1
DT= 5.0 min
OVERFLOW IS OFF
OUTFLOW STORAGE OUTFLOW STORAGE
(cms) (ha.m.) (cms) (ha.m.)
0.0000 0.0000 0.2300 1.1312

0.0230 0.3704 | 0.2810 1.3850
0.0900 0.8066 | 0.4120 2.2335

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
INFLOW : ID= 2 (0285)	33.560	2.156	2.00	11.65
OUTFLOW: ID= 1 (0280)	33.560	0.023	4.42	11.35

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.07
TIME SHIFT OF PEAK FLOW (min)=145.00
MAXIMUM STORAGE USED (ha.m.)= 0.3704

ADD HYD (0102)
3 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0274):	28.29	0.020	4.17	8.98
+ ID2= 2 (0275):	2.38	0.013	3.50	14.75
=====				
ID = 3 (0102):	30.67	0.032	4.00	9.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	30.67	0.032	4.00	9.42
+ ID2= 2 (0280):	33.56	0.023	4.42	11.35
=====				
ID = 1 (0102):	64.23	0.055	4.00	10.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0102):	64.23	0.055	4.00	10.43
+ ID2= 2 (0481):	18.79	1.087	2.00	8.12
=====				
ID = 3 (0102):	83.02	1.096	2.00	9.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0102)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0102):	83.02	1.096	2.00	9.91
+ ID2= 2 (0502):	117.52	0.374	3.00	3.30
=====				
ID = 1 (0102):	200.54	1.117	2.00	6.03

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 / 0.0700
127.36	84.21	0.0700
128.86	84.21	0.0700
130.86	85.21	0.0700 / 0.0900
131.88	86.36	0.0900
140.63	86.77	0.0900
168.26	86.90	0.0900
169.81	87.10	0.0900
202.11	87.50	0.0900
239.06	87.35	0.0900
270.29	87.83	0.0900
283.90	87.90	0.0900
297.51	87.86	0.0900
324.73	87.89	0.0900
351.95	87.78	0.0900
388.59	87.46	0.0900

----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89

1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph <----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0102)	200.54	1.12	2.00	6.03	0.60	0.67
OUTFLOW: ID= 1 (0503)	200.54	0.67	2.17	6.03	0.46	0.58

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 13.80
Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.49	3.31
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	303.32	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	71.13	6.32
over (min)	5.00	35.00
Storage Coeff. (min)=	5.70 (ii)	31.92 (ii)
Unit Hyd. Tpeak (min)=	5.00	35.00
Unit Hyd. peak (cms)=	0.20	0.03
PEAK FLOW (cms)=	1.16	0.03
TIME TO PEAK (hrs)=	2.00	2.67
RUNOFF VOLUME (mm)=	18.78	3.81
TOTAL RAINFALL (mm)=	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.15

TOTALS
1.163 (iii)

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0503):	200.54	0.667	2.17	6.03
+ ID2= 2 (0502):	13.80	1.163	2.00	13.83
=====				
ID = 3 (0104):	214.34	1.568	2.08	6.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2---> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) ----->

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900
217.10	82.90	0.0900
229.61	83.66	0.0900 / 0.0700
232.80	81.85	0.0700
243.24	83.87	0.0700
257.77	84.06	0.0900
312.01	83.52	0.0900
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900
513.93	82.96	0.0900
526.85	83.23	0.0900
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900

----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85

0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->			<-pipe / channel-->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	214.34	1.57	2.08	6.54	0.58
OUTFLOW: ID= 1 (0504)	214.34	0.99	2.33	6.54	0.29

CALIB		
STANDHYD (5042)		
ID= 1 DT= 5.0 min		
Area	(ha)=	7.70
Total Imp(%)=	75.00	Dir. Conn.(%)= 65.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	5.77	1.92		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	226.57	40.00		
Mannings n	=	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	71.13	5.87			
over (min)	5.00	35.00			
Storage Coeff. (min)=	4.78 (ii)	31.80 (ii)			
Unit Hyd. Tpeak (min)=	5.00	35.00			
Unit Hyd. peak (cms)=	0.22	0.03			
			TOTALS		
PEAK FLOW (cms)=	0.69	0.02	0.690 (iii)		
TIME TO PEAK (hrs)=	2.00	2.67	2.00		
RUNOFF VOLUME (mm)=	18.78	3.48	13.42		
TOTAL RAINFALL (mm)=	24.78	24.78	24.78		
RUNOFF COEFFICIENT =	0.76	0.14	0.54		

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)			AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3			(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0504):	214.34	0.991	2.33	6.54		
+ ID2= 2 (5042):	7.70	0.690	2.00	13.42		
=====						
ID = 3 (0106):	222.04	1.238	2.17	6.77		

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		
STANDHYD (5212)		
ID= 1 DT= 5.0 min		
Area	(ha)=	15.70
Total Imp(%)=	75.00	Dir. Conn.(%)= 66.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	11.78	3.93		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	323.52	40.00		
Mannings n	=	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	71.13	8.76			
over (min)	5.00	30.00			
Storage Coeff. (min)=	5.92 (ii)	28.93 (ii)			
Unit Hyd. Tpeak (min)=	5.00	30.00			
Unit Hyd. peak (cms)=	0.19	0.04			
			TOTALS		
PEAK FLOW (cms)=	1.27	0.05	1.277 (iii)		
TIME TO PEAK (hrs)=	2.00	2.58	2.00		
RUNOFF VOLUME (mm)=	18.78	4.78	14.02		
TOTAL RAINFALL (mm)=	24.78	24.78	24.78		
RUNOFF COEFFICIENT =	0.76	0.19	0.57		

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0114)		
1 + 2 = 3		
AREA	QPEAK	TPEAK
(ha)	(cms)	(hrs)
ID1= 1 (0106):	222.04	1.238
+ ID2= 2 (5212):	15.70	1.277
=====		
ID = 3 (0114):	237.74	2.324

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)		
IN= 2----> OUT= 1		
Routing time step (min)'= 5.00		
<----- DATA FOR SECTION (553.6) ----->		
Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100
69.13	79.02	0.1100
92.42	79.04	0.1100
98.70	80.89	0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100
266.11	81.68	0.1100
306.94	81.73	0.1100
331.74	81.55	0.1100 / 0.0700 Main Channel
336.74	80.15	0.0700 Main Channel
346.34	81.64	0.0700 / 0.0900 Main Channel
394.77	81.68	0.0900
431.64	81.44	0.0900
477.44	82.08	0.0900
481.25	82.81	0.0900
501.51	83.16	0.0900

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68

1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ---->			<-pipe / channel-->		
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.74	2.32	2.08	7.25	0.32
OUTFLOW: ID= 1 (0505)	237.74	1.79	2.25	7.25	0.27

CALIB		
STANDHYD (5052)		
ID= 1 DT= 5.0 min		
Area	(ha)=	15.90
Total Imp(%)=	74.00	Dir. Conn.(%)= 65.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	11.77	4.13		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	325.58	40.00		
Mannings n	=	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	71.13	5.31			
over (min)	5.00	35.00			
Storage Coeff. (min)=	5.94 (ii)	34.05 (ii)			
Unit Hyd. Tpeak (min)=	5.00	35.00			
Unit Hyd. peak (cms)=	0.19	0.03			
			TOTALS		
PEAK FLOW (cms)=	1.27	0.03	1.269 (iii)		
TIME TO PEAK (hrs)=	2.00	2.67	2.00		
RUNOFF VOLUME (mm)=	18.78	3.30	13.36		
TOTAL RAINFALL (mm)=	24.78	24.78	24.78		
RUNOFF COEFFICIENT =	0.76	0.13	0.54		

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0505):	237.74	1.788	2.25	7.25
+ ID2= 2 (5052):	15.90	1.269	2.00	13.36
=====				
ID = 3 (0108):	253.64	2.506	2.17	7.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)				
IN= 2----> OUT= 1				
Routing time step (min)'= 5.00				
<----- DATA FOR SECTION (304.1) ----->				
Distance	Elevation	Manning		
0.00	81.42	0.0900		
7.45	81.36	0.0900		
32.34	80.38	0.0900		
45.97	80.05	0.0900		
65.23	79.93	0.0900		
84.49	80.35	0.0900		
113.49	80.02	0.0900		
136.48	80.07	0.0900		
188.81	79.81	0.0900		
197.86	79.25	0.0900 /0.0700		
200.70	78.22	0.0700		Main Channel
203.29	79.35	0.0700 /0.0900		Main Channel
204.01	79.67	0.0900		
236.47	80.40	0.0900		
277.80	80.48	0.0900		
305.35	80.37	0.0900		
346.67	80.41	0.0900		
387.99	80.33	0.0900		
415.54	80.53	0.0900		
447.88	80.49	0.0900		

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36

CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0506):	253.64	2.397	2.25	7.63
+ ID2= 2 (5062):	11.70	0.983	2.00	13.57
=====				
ID = 3 (0110):	265.34	2.824	2.17	7.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (5102)				
ID= 1 DT= 5.0 min				
		Area (ha)= 1.70		
		Total Imp(%)= 64.00	Dir. Conn.(%)= 52.00	
		IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.09	0.61		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	106.46	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	71.13	4.79		
over (min)	5.00	35.00		
Storage Coeff. (min)=	3.04 (ii)	32.33 (ii)		
Unit Hyd. Tpeak (min)=	5.00	35.00		
Unit Hyd. peak (cms)=	0.27	0.03		
				TOTALS
PEAK FLOW (cms)=	0.15	0.00	0.147 (iii)	
TIME TO PEAK (hrs)=	2.00	2.67	2.00	
RUNOFF VOLUME (mm)=	18.78	3.02	11.20	
TOTAL RAINFALL (mm)=	24.78	24.78	24.78	
RUNOFF COEFFICIENT =	0.76	0.12	0.45	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ---->					<-pipe / channel->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0108)	253.64	2.51	2.17	7.63	1.00	0.98
OUTFLOW: ID= 1 (0506)	253.64	2.40	2.25	7.63	0.99	0.97

CALIB				
STANDHYD (5062)				
ID= 1 DT= 5.0 min				
		Area (ha)= 11.70		
		Total Imp(%)= 75.00	Dir. Conn.(%)= 65.00	
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	8.78	2.92	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	279.28	40.00	
Mannings n	=	0.013	0.250	
Max.Eff.Inten.(mm/hr)=		71.13	7.29	
over	(min)	5.00	35.00	
Storage Coeff.	(min)=	5.42 (ii)	30.19 (ii)	
Unit Hyd. Tpeak	(min)=	5.00	35.00	
Unit Hyd. peak	(cms)=	0.20	0.04	
		TOTALS		
PEAK FLOW	(cms)=	0.98	0.03	0.983 (
TIME TO PEAK	(hrs)=	2.00	2.67	2.00
RUNOFF VOLUME	(mm)=	18.78	3.90	13.57
TOTAL RAINFALL	(mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT	=	0.76	0.16	0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:


```
<----- DATA FOR SECTION ( 484.2) ----->
```

	<---- hydrograph ---->				<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0117)	4.70	0.31	2.00	12.00	0.53	0.36
OUTFLOW: ID= 1 (0512)	4.70	0.12	2.25	11.93	0.36	0.27

IMPERVIOUS PERVIOUS (i)

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

Max. Eff. Inten. (mm/hr)=	71.13	2.45	
over (min)	5.00	45.00	
Storage Coeff. (min)=	5.32 (ii)	43.60 (ii)	
Unit Hyd. Tpeak (min)=	5.00	45.00	
Unit Hyd. peak (cms)=	0.21	0.03	
			TOTALS
PEAK FLOW (cms)=	0.23	0.03	0.230 (iii)
TIME TO PEAK (hrs)=	2.00	2.92	2.00
RUNOFF VOLUME (mm)=	18.78	2.12	4.78
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.09	0.19

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6011):	44.10	0.092	3.25	1.63
+ ID2= 2 (6012):	11.00	0.230	2.00	4.78
=====				
ID = 3 (0124):	55.10	0.231	2.00	2.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021)
ID= 1 DT= 5.0 min

Area (ha)=	43.60	Curve Number (CN)=	62.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.95		

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.083 (i)
TIME TO PEAK (hrs)= 3.417
RUNOFF VOLUME (mm)= 1.632
TOTAL RAINFALL (mm)= 24.775
RUNOFF COEFFICIENT = 0.066

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min

Area (ha)=	12.90	Dir. Conn.(%)=	23.00
Total Imp(%)=	35.00		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.51	8.38
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	293.26	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)= 71.13 2.56
over (min) 5.00 45.00
Storage Coeff. (min)= 5.58 (ii) 43.22 (ii)
Unit Hyd. Tpeak (min)= 5.00 45.00
Unit Hyd. peak (cms)= 0.20 0.03

TOTALS

PEAK FLOW (cms)= 0.38 0.03 0.378 (iii)

TIME TO PEAK (hrs)=	2.00	2.92	2.00
RUNOFF VOLUME (mm)=	18.78	2.17	5.99
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.09	0.24

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (6021):	43.60	0.083	3.42	1.63
+ ID2= 2 (6022):	12.90	0.378	2.00	5.99
=====				
ID = 3 (0125):	56.50	0.378	2.00	2.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0124):	55.10	0.231	2.00	2.26
+ ID2= 2 (0125):	56.50	0.378	2.00	2.63
=====				
ID = 3 (0126):	111.60	0.609	2.00	2.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2---- OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning
0.00	92.58	0.1400
8.54	92.59	0.1400
22.11	92.47	0.1400
48.74	91.83	0.1400
67.59	91.58	0.1400
86.45	91.21	0.1400
103.50	90.80	0.1400

118.09	90.23	0.1400
127.84	90.09	0.1400 /0.0700
129.84	89.59	0.0700
130.34	90.09	0.0700 /0.1400
140.57	90.14	0.1400
161.87	90.11	0.1400
177.03	90.04	0.1400
188.67	89.87	0.1400
199.59	90.31	0.1400
212.02	90.96	0.1400
225.58	91.35	0.1400
252.71	91.66	0.1400
274.11	91.86	0.1400

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

<---- hydrograph ---->

<-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0126)	111.60	0.61	2.00	2.45	0.50	0.20
OUTFLOW: ID= 1 (0603)	111.60	0.21	3.92	2.44	0.39	0.22

CALIB
NASHYD (0613)
ID= 1 DT= 5.0 min

Area (ha)=	1.77	Curve Number (CN)=	66.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00

CALIB
STANDHYD (0614)
ID= 1 DT= 5.0 min

Area (ha)=	1.50	Dir. Conn.(%)=	50.00
Total Imp(%)=	69.00		

				IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	1.04		1.04	0.47
Dep. Storage	(mm)=	6.00		6.00	8.00
Average Slope	(%)=	1.00		1.00	1.00
Length	(m)=	100.00		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		71.13		7.57	
over (min)		5.00		30.00	
Storage Coeff. (min)=		2.93 (ii)		27.32 (ii)	
Unit Hyd. Tpeak (min)=		5.00		30.00	
Unit Hyd. peak (cms)=		0.28		0.04	
				TOTALS	
PEAK FLOW	(cms)=	0.13	0.01	0.126 (iii)	
TIME TO PEAK	(hrs)=	2.00	2.58	2.00	
RUNOFF VOLUME	(mm)=	18.78	3.50	11.13	
TOTAL RAINFALL	(mm)=	24.78	24.78	24.78	
RUNOFF COEFFICIENT	=	0.76	0.14	0.45	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

				IMPERVIOUS	PERVIOUS (i)
CALIB					
STANDHYD (0615)					
ID= 1 DT= 5.0 min					
Area (ha)=	2.14				
Total Imp(%)=	78.00	Dir. Conn.(%)=	78.00		
Surface Area	(ha)=	1.67		0.47	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	119.44		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		71.13		2.02	
over (min)		5.00		45.00	
Storage Coeff. (min)=		3.26 (ii)		44.66 (ii)	
Unit Hyd. Tpeak (min)=		5.00		45.00	
Unit Hyd. peak (cms)=		0.27		0.03	
				TOTALS	
PEAK FLOW	(cms)=	0.27	0.00	0.271 (iii)	
TIME TO PEAK	(hrs)=	2.00	3.00	2.00	
RUNOFF VOLUME	(mm)=	18.78	2.23	15.12	

TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.09	0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

				IMPERVIOUS	PERVIOUS (i)
CALIB					
STANDHYD (0618)					
ID= 1 DT= 5.0 min					
Area (ha)=	1.49				
Total Imp(%)=	78.00	Dir. Conn.(%)=	50.00		
Surface Area	(ha)=	1.16		0.33	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	99.67		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		71.13		18.35	
over (min)		5.00		25.00	
Storage Coeff. (min)=		2.92 (ii)		20.04 (ii)	
Unit Hyd. Tpeak (min)=		5.00		25.00	
Unit Hyd. peak (cms)=		0.28		0.05	
				TOTALS	
PEAK FLOW	(cms)=	0.13	0.01	0.126 (iii)	
TIME TO PEAK	(hrs)=	2.00	2.42	2.00	
RUNOFF VOLUME	(mm)=	18.78	5.21	11.98	
TOTAL RAINFALL	(mm)=	24.78	24.78	24.78	
RUNOFF COEFFICIENT	=	0.76	0.21	0.48	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

				IMPERVIOUS	PERVIOUS (i)
CALIB					
STANDHYD (6302)					
ID= 1 DT= 5.0 min					
Area (ha)=	0.86				
Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00		

				IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	0.81		0.05	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	75.72		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		71.13		2.52	
over (min)		5.00		10.00	
Storage Coeff. (min)=		2.48 (ii)		5.79 (ii)	
Unit Hyd. Tpeak (min)=		5.00		10.00	
Unit Hyd. peak (cms)=		0.29		0.15	
				TOTALS	
PEAK FLOW	(cms)=	0.14	0.00	0.142 (iii)	
TIME TO PEAK	(hrs)=	2.00	2.17	2.00	
RUNOFF VOLUME	(mm)=	18.78	1.70	17.75	
TOTAL RAINFALL	(mm)=	24.78	24.78	24.78	
RUNOFF COEFFICIENT	=	0.76	0.07	0.72	

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

				IMPERVIOUS	PERVIOUS (i)
CALIB					
STANDHYD (0617)					
ID= 1 DT= 5.0 min					
Area (ha)=	2.31				
Total Imp(%)=	78.00	Dir. Conn.(%)=	50.00		
Surface Area	(ha)=	1.80		0.51	
Dep. Storage	(mm)=	6.00		8.00	
Average Slope	(%)=	1.00		1.00	
Length	(m)=	124.10		40.00	
Mannings n	=	0.013		0.250	
Max.Eff.Inten.(mm/hr)=		71.13		26.77	
over (min)		5.00		20.00	
Storage Coeff. (min)=		3.33 (ii)		18.05 (ii)	
Unit Hyd. Tpeak (min)=		5.00		20.00	
Unit Hyd. peak (cms)=		0.26		0.06	
				TOTALS	
PEAK FLOW	(cms)=	0.19	0.02	0.189 (iii)	
TIME TO PEAK	(hrs)=	2.00	2.33	2.00	
RUNOFF VOLUME	(mm)=	18.78	6.48	12.62	
TOTAL RAINFALL	(mm)=	24.78	24.78	24.78	

RUNOFF COEFFICIENT =	0.76	0.26	0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 69.7 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

				AREA	QPEAK	TPEAK	R.V.
ADD HYD (0290)							
1 + 2 = 3							
ID1= 1 (0614):	1.50	0.126	2.00	11.13			
+ ID2= 2 (0615):	2.14	0.271	2.00	15.12			
=====							
ID = 3 (0290):	3.64	0.397	2.00	13.48			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

				AREA	QPEAK	TPEAK	R.V.
ADD HYD (0290)							
3 + 2 = 1							
ID1= 3 (0290):	3.64	0.397	2.00	13.48			
+ ID2= 2 (0617):	2.31	0.189	2.00	12.62			
=====							
ID = 1 (0290):	5.95	0.586	2.00	13.14			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

				AREA	QPEAK	TPEAK	R.V.
ADD HYD (0290)							
1 + 2 = 3							
ID1= 1 (0290):	5.95	0.586	2.00	13.14			
+ ID2= 2 (0618):	1.49	0.126	2.00	11.98			
=====							
ID = 3 (0290):	7.44	0.712	2.00	12.91			

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)							

3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0290):	7.44	0.712	2.00	12.91
+ ID2= 2 (6222):	2.02	0.257	2.00	15.12
=====				
ID = 1 (0290):	9.46	0.969	2.00	13.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0290)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0290):	9.46	0.969	2.00	13.38
+ ID2= 2 (6302):	0.86	0.142	2.00	17.75
=====				
ID = 3 (0290):	10.32	1.112	2.00	13.75

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	1.15	
STANDHYD (6212)	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00
ID= 1 DT= 5.0 min				

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.75	0.40	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	87.56	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	1.44	
over (min)	5.00	55.00	
Storage Coeff. (min)=	2.70 (ii)	50.03 (ii)	
Unit Hyd. Tpeak (min)=	5.00	55.00	
Unit Hyd. peak (cms)=	0.29	0.02	
			TOTALS
PEAK FLOW (cms)=	0.13	0.00	0.129 (iii)
TIME TO PEAK (hrs)=	2.00	3.17	2.00
RUNOFF VOLUME (mm)=	18.78	1.70	12.77
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.07	0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area	(ha)=	0.85	
STANDHYD (6232)	Total Imp(%)=	65.00	Dir. Conn.(%)=	65.00
ID= 1 DT= 5.0 min				

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.55	0.30	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	75.28	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	1.44	
over (min)	5.00	50.00	
Storage Coeff. (min)=	2.47 (ii)	49.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	50.00	
Unit Hyd. peak (cms)=	0.29	0.02	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.097 (iii)
TIME TO PEAK (hrs)=	2.00	3.08	2.00
RUNOFF VOLUME (mm)=	18.78	1.70	12.76
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.07	0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0288)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6212):	1.15	0.129	2.00	12.77
+ ID2= 2 (6232):	0.85	0.097	2.00	12.76
=====				
ID = 3 (0288):	2.00	0.226	2.00	12.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	0.96	
STANDHYD (0626)	Total Imp(%)=	60.00	Dir. Conn.(%)=	60.00
ID= 1 DT= 5.0 min				

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.58	0.38	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	80.00	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	3.49	
over (min)	5.00	40.00	
Storage Coeff. (min)=	2.56 (ii)	35.80 (ii)	
Unit Hyd. Tpeak (min)=	5.00	40.00	
Unit Hyd. peak (cms)=	0.29	0.03	
			TOTALS
PEAK FLOW (cms)=	0.10	0.00	0.101 (iii)
TIME TO PEAK (hrs)=	2.00	2.83	2.00
RUNOFF VOLUME (mm)=	18.78	3.33	12.58
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.13	0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0297)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0288):	2.00	0.226	2.00	12.77
+ ID2= 2 (0290):	10.32	1.112	2.00	13.75
=====				
ID = 3 (0297):	12.32	1.338	2.00	13.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0297):	12.32	1.338	2.00	13.59

+ ID2= 2 (0613):	1.77	0.009	2.33	1.90
=====				
ID = 1 (0297):	14.09	1.339	2.00	12.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0297)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0297):	14.09	1.339	2.00	12.12
+ ID2= 2 (0626):	0.96	0.101	2.00	12.58
=====				
ID = 3 (0297):	15.05	1.440	2.00	12.15

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR (0302)	OVERFLOW IS OFF			
IN= 2--> OUT= 1				
DT= 5.0 min	OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
	0.0000	0.0000	0.1070	0.3146
	0.0150	0.1715	0.7100	0.8031

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
INFLOW : ID= 2 (0297)	15.050	1.440	2.00	12.15
OUTFLOW: ID= 1 (0302)	15.050	0.015	4.08	11.96

PEAK FLOW REDUCTION [Qout/Qin](%)= 1.04
TIME SHIFT OF PEAK FLOW (min)=125.00
MAXIMUM STORAGE USED (ha.m.)= 0.1715

CALIB	Area	(ha)=	1.26	
STANDHYD (6202)	Total Imp(%)=	94.00	Dir. Conn.(%)=	94.00
ID= 1 DT= 5.0 min				

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.18	0.08	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	91.65	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	2.52	
over (min)	5.00	10.00	

Storage Coeff. (min)= 2.78 (ii) 6.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.28 0.15

PEAK FLOW (cms)= 0.20 0.00 0.202 (iii)
TIME TO PEAK (hrs)= 2.00 2.17 2.00
RUNOFF VOLUME (mm)= 18.78 1.70 17.75
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.07 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0292)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.0580	0.0848
0.0090	0.0366	0.0000	0.0000

INFLOW : ID= 2 (6202) 1.260 0.202 2.00 17.75
OUTFLOW: ID= 1 (0292) 1.260 0.005 3.92 16.93

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.35
TIME SHIFT OF PEAK FLOW (min)=115.00
MAXIMUM STORAGE USED (ha.m.)= 0.0193

CALIB
STANDHYD (0606)
ID= 1 DT= 5.0 min

Area (ha)= 1.98
Total Imp(%)= 65.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	1.29	0.69
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	114.89	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)= 71.13 1.44

over (min) 5.00 55.00
Storage Coeff. (min)= 3.18 (ii) 50.51 (ii)
Unit Hyd. Tpeak (min)= 5.00 55.00
Unit Hyd. peak (cms)= 0.27 0.02

PEAK FLOW (cms)= 0.21 0.00 0.210 (iii)
TIME TO PEAK (hrs)= 2.00 3.17 2.00
RUNOFF VOLUME (mm)= 18.78 1.70 12.78
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.07 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (0612)
ID= 1 DT= 5.0 min

Area (ha)= 2.18
Total Imp(%)= 94.00 Dir. Conn.(%)= 94.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)=	2.05	0.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	120.55	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)= 71.13 2.52
over (min) 5.00 10.00
Storage Coeff. (min)= 3.28 (ii) 6.59 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.27 0.14

PEAK FLOW (cms)= 0.33 0.00 0.332 (iii)
TIME TO PEAK (hrs)= 2.00 2.17 2.00
RUNOFF VOLUME (mm)= 18.78 1.70 17.75
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.07 0.72

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 63.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

RESERVOIR(0295)
IN= 2----> OUT= 1
DT= 5.0 min

OVERFLOW IS OFF

OUTFLOW (cms)	STORAGE (ha.m.)	OUTFLOW (cms)	STORAGE (ha.m.)
0.0000	0.0000	0.1000	0.1464
0.0159	0.0631	0.0000	0.0000

INFLOW : ID= 2 (0612) 2.180 0.332 2.00 17.75
OUTFLOW: ID= 1 (0295) 2.180 0.008 3.92 17.29

PEAK FLOW REDUCTION [Qout/Qin](%)= 2.53
TIME SHIFT OF PEAK FLOW (min)=115.00
MAXIMUM STORAGE USED (ha.m.)= 0.0334

ADD HYD (0306)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0292):	1.26	0.005	3.92	16.93
+ ID2= 2 (0295):	2.18	0.008	3.92	17.29
ID = 3 (0306):	3.44	0.013	3.92	17.16

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0306)
3 + 2 = 1

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0306):	3.44	0.013	3.92	17.16
+ ID2= 2 (0606):	1.98	0.210	2.00	12.78
ID = 1 (0306):	5.42	0.213	2.00	15.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0304)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning
0.00	92.50	0.0700
36.57	92.00	0.0700
90.03	91.00	0.0700
124.58	90.00	0.0700 / 0.0350
128.34	89.59	0.0350
129.84	89.59	0.0350
132.39	90.00	0.0350 / 0.0700
163.76	91.00	0.0700
187.47	91.00	0.0700
203.83	91.00	0.0700
306.44	92.00	0.0700

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	89.69	.215E+03	0.1	0.46	33.36
0.20	89.79	.579E+03	0.4	0.67	22.75
0.31	89.90	.109E+04	1.0	0.84	18.13
0.41	90.00	.175E+04	1.9	0.99	15.37
0.54	90.13	.324E+04	4.0	1.14	13.36
0.68	90.27	.581E+04	7.3	1.15	13.32
0.81	90.40	.945E+04	11.9	1.15	13.29
0.94	90.53	.142E+05	18.0	1.17	13.10
1.08	90.67	.200E+05	26.0	1.19	12.79
1.21	90.80	.268E+05	36.0	1.23	12.42
1.34	90.93	.348E+05	48.2	1.27	12.03
1.48	91.07	.464E+05	58.3	1.15	13.27
1.61	91.20	.629E+05	78.8	1.15	13.30
1.74	91.33	.819E+05	104.3	1.17	13.08
1.88	91.47	.103E+06	135.3	1.20	12.74
2.01	91.60	.128E+06	172.1	1.24	12.35
2.14	91.73	.154E+06	215.1	1.28	11.94
2.28	91.87	.183E+06	264.7	1.32	11.54
2.41	92.00	.215E+06	321.3	1.37	11.15

hydrograph

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0306)	5.42	0.21	2.00	15.56	0.14
OUTFLOW: ID= 1 (0304)	5.42	0.06	2.25	15.55	0.05

CALIB
STANDHYD (0616)
ID= 1 DT= 5.0 min

Area (ha)= 0.44
Total Imp(%)= 78.00 Dir. Conn.(%)= 78.00

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.34	0.10	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	54.16	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	3.49	
over (min)	5.00	40.00	
Storage Coeff. (min)=	2.03 (ii)	35.27 (ii)	
Unit Hyd. Tpeak (min)=	5.00	40.00	
Unit Hyd. peak (cms)=	0.31	0.03	
			TOTALS
PEAK FLOW (cms)=	0.06	0.00	0.063 (iii)
TIME TO PEAK (hrs)=	2.00	2.83	2.00
RUNOFF VOLUME (mm)=	18.78	3.33	15.33
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.13	0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	2.49	
STANDHYD (6102)	Total Imp(%)=	78.00	Dir. Conn.(%)= 50.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.94	0.55	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	128.84	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	38.37	
over (min)	5.00	20.00	
Storage Coeff. (min)=	3.41 (ii)	16.15 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.26	0.06	
			TOTALS
PEAK FLOW (cms)=	0.20	0.03	0.204 (iii)
TIME TO PEAK (hrs)=	2.00	2.33	2.00
RUNOFF VOLUME (mm)=	18.78	8.97	13.87
TOTAL RAINFALL (mm)=	24.78	24.78	24.78

RUNOFF COEFFICIENT = 0.76 0.36 0.56

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.3 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area (ha)=	0.89	
STANDHYD (0624)	Total Imp(%)=	78.00	Dir. Conn.(%)= 78.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	0.69	0.20	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	77.03	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	3.49	
over (min)	5.00	40.00	
Storage Coeff. (min)=	2.50 (ii)	35.75 (ii)	
Unit Hyd. Tpeak (min)=	5.00	40.00	
Unit Hyd. peak (cms)=	0.29	0.03	
			TOTALS
PEAK FLOW (cms)=	0.12	0.00	0.122 (iii)
TIME TO PEAK (hrs)=	2.00	2.83	2.00
RUNOFF VOLUME (mm)=	18.78	3.33	15.35
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.13	0.62

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 78.9 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0286)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6102):	2.49	0.204	2.00	13.87

+ ID2= 2 (0616):	0.44	0.063	2.00	15.33
ID = 3 (0286):	2.93	0.267	2.00	14.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0286)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0286):	2.93	0.267	2.00	14.09
+ ID2= 2 (0624):	0.89	0.122	2.00	15.35
ID = 1 (0286):	3.82	0.389	2.00	14.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

RESERVOIR(0305)	OVERFLOW IS OFF		
IN= 2---> OUT= 1			
DT= 5.0 min			
OUTFLOW (cms)	STORAGE (ha.m.)		
0.0000	0.0000		
0.0280	0.0927		
OUTFLOW (cms)	STORAGE (ha.m.)		
0.1760	0.2330		
0.0000	0.0000		
AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
3.820	0.389	2.00	14.38
3.820	0.014	3.92	14.16

PEAK FLOW REDUCTION [Qout/Qin](%)= 3.55
TIME SHIFT OF PEAK FLOW (min)=115.00
MAXIMUM STORAGE USED (ha.m.)= 0.0458

CALIB	Area (ha)=	1.64	
STANDHYD (0619)	Total Imp(%)=	65.00	Dir. Conn.(%)= 65.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	1.07	0.57	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	104.56	40.00	
Mannings n =	0.013	0.250	
Max.Eff.Inten.(mm/hr)=	71.13	4.69	
over (min)	5.00	35.00	

Storage Coeff. (min)=	3.01 (ii)	32.55 (ii)	
Unit Hyd. Tpeak (min)=	5.00	35.00	
Unit Hyd. peak (cms)=	0.28	0.03	
			TOTALS
PEAK FLOW (cms)=	0.18	0.00	0.178 (iii)
TIME TO PEAK (hrs)=	2.00	2.75	2.00
RUNOFF VOLUME (mm)=	18.78	4.09	13.62
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.17	0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 83.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0293)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0302):	15.05	0.015	4.08	11.96
+ ID2= 2 (0304):	5.42	0.057	2.25	15.55
ID = 3 (0293):	20.47	0.067	2.33	12.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)	AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0293):	20.47	0.067	2.33	12.91
+ ID2= 2 (0305):	3.82	0.014	3.92	14.16
ID = 1 (0293):	24.29	0.076	2.33	13.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0293)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0293):	24.29	0.076	2.33	13.11
+ ID2= 2 (0619):	1.64	0.178	2.00	13.62

=====

ID = 3 (0293): 25.93 0.204 2.00 13.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6032)
ID= 1 DT= 5.0 min

Area (ha)= 29.63
Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 13.93 15.70
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.45 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 52.91 5.52
over (min) 10.00 40.00
Storage Coeff. (min)= 8.07 (ii) 35.74 (ii)
Unit Hyd. Tpeak (min)= 10.00 40.00
Unit Hyd. peak (cms)= 0.13 0.03

TOTALS
PEAK FLOW (cms)= 1.08 0.12 1.091 (iii)
TIME TO PEAK (hrs)= 2.08 2.75 2.08
RUNOFF VOLUME (mm)= 23.28 3.60 9.89
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.94 0.15 0.40

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0293): 25.93 0.204 2.00 13.14
+ ID2= 2 (0603): 111.60 0.212 3.92 2.44

=====

ID = 3 (0128): 137.53 0.273 3.83 4.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
3 + 2 = 1

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 3 (0128): 137.53 0.273 3.83 4.46
+ ID2= 2 (6032): 29.63 1.091 2.08 9.89

=====

ID = 1 (0128): 167.16 1.333 2.08 5.42

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2--> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700
166.55	83.78	0.0700
168.05	84.78	0.0700 / 0.1100
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63

1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<--- hydrograph ---> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.16	1.33	2.08	5.42	1.67	0.09
OUTFLOW: ID= 1 (0604)	167.16	0.42	2.33	5.42	1.23	0.10

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min

Area (ha)= 24.00
Total Imp(%)= 78.00 Dir. Conn.(%)= 69.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 18.72 5.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 400.00 40.00
Mannings n = 0.013 0.250

Max.Eff.Inten.(mm/hr)= 52.91 10.47
over (min) 10.00 30.00
Storage Coeff. (min)= 7.57 (ii) 29.00 (ii)
Unit Hyd. Tpeak (min)= 10.00 30.00
Unit Hyd. peak (cms)= 0.13 0.04

TOTALS
PEAK FLOW (cms)= 1.72 0.08 1.738 (iii)
TIME TO PEAK (hrs)= 2.08 2.58 2.08
RUNOFF VOLUME (mm)= 18.78 5.44 14.64
TOTAL RAINFALL (mm)= 24.78 24.78 24.78
RUNOFF COEFFICIENT = 0.76 0.22 0.59

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0604): 167.16 0.418 2.33 5.42
+ ID2= 2 (6042): 24.00 1.738 2.08 14.64

=====

ID = 3 (0130): 191.16 2.016 2.08 6.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2--> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 / 0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 / 0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100
404.40	82.68	0.1100

----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67

0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

		<--- hydrograph <--->			<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0130)	191.16	2.02	2.08	6.57	0.83	0.26
OUTFLOW: ID= 1 (0605)	191.16	0.81	2.75	6.57	0.71	0.28

CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0605):	191.16	0.807	2.75	6.57
+ ID2= 2 (6112):	11.40	0.918	2.00	13.31
ID = 3 (0139):	202.56	1.048	2.08	6.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)=	15.90
STANDHYD (6052)	Total Imp(%)=	74.00	Dir. Conn.(%)= 65.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.77	4.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	325.58	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)=	71.13	4.91
over (min)	5.00	35.00
Storage Coeff. (min)=	5.94 (ii)	34.95 (ii)
Unit Hyd. Tpeak (min)=	5.00	35.00
Unit Hyd. peak (cms)=	0.19	0.03
PEAK FLOW (cms)=	1.27	0.03
TIME TO PEAK (hrs)=	2.00	2.67
RUNOFF VOLUME (mm)=	18.78	3.06
TOTAL RAINFALL (mm)=	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.12

TOTALS

1.269 (iii)
2.00
13.27
24.78
0.54

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

ADD HYD (0132)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0139):	202.56	1.048	2.08	6.95
+ ID2= 2 (6052):	15.90	1.269	2.00	13.27
ID = 3 (0132):	218.46	2.272	2.00	7.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)	Routing time step (min)'= 5.00	
IN= 2--> OUT= 1		
----- DATA FOR SECTION (350.0) -----		
Distance	Elevation	Manning
0.00	81.70	0.1100
3.84	81.72	0.1100
5.87	80.72	0.1100
9.38	81.42	0.1100
49.64	81.07	0.1100
80.61	80.72	0.1100
85.61	81.14	0.1100
93.32	80.00	0.1100
95.04	80.45	0.1100
102.72	80.66	0.1100
110.13	78.93	0.1100 / 0.0700 Main Channel
118.05	78.63	0.0700 Main Channel
124.40	78.89	0.0700 / 0.1100 Main Channel
132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29

1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.46	2.27	2.00	7.41	0.44	0.51
OUTFLOW: ID= 1 (0530)	218.46	1.28	2.33	7.41	0.34	0.37

CALIB	Area	(ha)=	5.80
STANDHYD (5302)	Total Imp(%)=	66.00	Dir. Conn.(%)= 56.00
ID= 1 DT= 5.0 min			

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.83	1.97
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00
Mannings n =	0.013	0.250

Max.Eff.Inten.(mm/hr)=	71.13	4.08
over (min)	5.00	40.00
Storage Coeff. (min)=	4.39 (ii)	35.64 (ii)
Unit Hyd. Tpeak (min)=	5.00	40.00
Unit Hyd. peak (cms)=	0.23	0.03
PEAK FLOW (cms)=	0.47	0.01
TIME TO PEAK (hrs)=	2.00	2.75
RUNOFF VOLUME (mm)=	18.78	2.89
TOTAL RAINFALL (mm)=	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.12

TOTALS

0.466 (iii)
2.00
11.78
24.78
0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL

THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.46	1.279	2.33	7.41
+ ID2= 2 (5302):	5.80	0.466	2.00	11.78
ID = 3 (0134):	224.26	1.423	2.25	7.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	273.94	3.092	2.17	8.03
+ ID2= 2 (0134):	224.26	1.423	2.25	7.52
ID = 3 (0135):	498.20	4.473	2.17	7.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)				
IN= 2---> OUT= 1	Routing time step (min)=	5.00		
<----- DATA FOR SECTION (40.0) ----->				
Distance	Elevation	Manning		
0.00	79.36	0.0900		
7.45	79.32	0.0900		
13.77	79.27	0.0900		
20.24	79.24	0.0900		
27.28	79.26	0.0900		
34.16	79.13	0.0900		
40.79	79.05	0.0900		
47.58	79.05	0.0900		
54.30	79.07	0.0900		
60.87	79.24	0.0900		
71.39	79.48	0.0900		
73.53	78.96	0.0900		
76.96	78.07	0.0900		
82.21	77.08	0.0900 /0.0700	Main Channel	
85.82	76.28	0.0700	Main Channel	
89.97	76.89	0.0700	Main Channel	

over (min)	10.00	40.00	
Storage Coeff. (min)=	9.37 (ii)	36.19 (ii)	
Unit Hyd. Tpeak (min)=	10.00	40.00	
Unit Hyd. peak (cms)=	0.12	0.03	
TOTALS			
PEAK FLOW (cms)=	1.63	0.20	1.652 (iii)
TIME TO PEAK (hrs)=	2.08	2.75	2.08
RUNOFF VOLUME (mm)=	18.78	3.89	9.25
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.16	0.37

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0507):	498.20	3.094	2.58	7.80
+ ID2= 2 (5072):	48.90	1.652	2.08	9.25
ID = 3 (0122):	547.10	3.823	2.42	7.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (5402)	Area (ha)=	9.40		
ID= 1 DT= 5.0 min	Total Imp(%)=	50.00	Dir. Conn.(%)=	35.00
IMPERVIOUS PERVIOUS (i)				
Surface Area (ha)=	4.70	4.70		
Dep. Storage (mm)=	6.00	8.00		
Average Slope (%)=	1.00	1.00		
Length (m)=	250.33	40.00		
Mannings n =	0.013	0.250		
Max.Eff.Inten.(mm/hr)=	71.13	4.13		
over (min)	5.00	40.00		
Storage Coeff. (min)=	5.08 (ii)	36.18 (ii)		
Unit Hyd. Tpeak (min)=	5.00	40.00		
Unit Hyd. peak (cms)=	0.21	0.03		
TOTALS				
PEAK FLOW (cms)=	0.44	0.03	0.441 (iii)	

91.35	77.38	0.0700 /0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.16	76.44	.113E+03	0.0	0.14	88.10	
0.32	76.60	.451E+03	0.1	0.23	55.50	
0.49	76.76	.101E+04	0.4	0.30	42.35	
0.65	76.92	.180E+04	0.9	0.37	34.57	
0.81	77.09	.276E+04	1.6	0.44	28.86	
0.97	77.25	.388E+04	2.7	0.52	24.37	
1.14	77.41	.516E+04	4.0	0.59	21.56	
1.30	77.57	.660E+04	5.7	0.66	19.26	
1.46	77.74	.822E+04	7.8	0.72	17.67	
1.62	77.90	.100E+05	10.1	0.77	16.48	
1.79	78.06	.120E+05	12.8	0.82	15.54	
1.95	78.22	.141E+05	15.9	0.87	14.74	
2.11	78.39	.163E+05	19.4	0.91	14.06	
2.27	78.55	.187E+05	23.2	0.95	13.47	
2.44	78.71	.212E+05	27.3	0.99	12.95	
2.60	78.87	.239E+05	31.9	1.02	12.50	
2.76	79.04	.267E+05	36.8	1.06	12.10	
2.92	79.20	.320E+05	39.4	0.94	13.56	
3.09	79.36	.409E+05	45.7	0.85	14.94	

<---- hydrograph ----> <-pipe / channel->						
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.20	4.47	2.17	7.80	1.18	0.61
OUTFLOW: ID= 1 (0507)	498.20	3.09	2.58	7.80	1.02	0.54

CALIB				
STANDHYD (5072)	Area (ha)=	48.90		
ID= 1 DT= 5.0 min	Total Imp(%)=	50.00	Dir. Conn.(%)=	36.00

IMPERVIOUS PERVIOUS (i)		
Surface Area (ha)=	24.45	24.45
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	570.96	40.00
Mannings n =	0.013	0.250
Max.Eff.Inten.(mm/hr)=	52.91	5.98

TIME TO PEAK (hrs)=	2.00	2.75	2.00
RUNOFF VOLUME (mm)=	18.78	2.91	8.46
TOTAL RAINFALL (mm)=	24.78	24.78	24.78
RUNOFF COEFFICIENT =	0.76	0.12	0.34

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505)									
ID= 1 DT= 5.0min	AREA	(ha)=	30.00						
	QPEAK	(cms)=	0.78						
	TPEAK	(hrs)=	15.58						
	VOLUME	(mm)=	402.14						
TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.16
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17

2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.18
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17

6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.21	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.1

10.75	0.00	42.17	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15
10.92	0.00	42.25	0.26	73.58	0.60	104.92	0.16	136.25	0.15
11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15
11.17	0.00	42.50	0.26	73.83	0.59	105.17	0.16	136.50	0.15
11.25	0.00	42.58	0.26	73.92	0.57	105.25	0.16	136.58	0.15
11.33	0.00	42.67	0.26	74.00	0.57	105.33	0.16	136.67	0.15
11.42	0.00	42.75	0.25	74.08	0.57	105.42	0.16	136.75	0.14
11.50	0.00	42.83	0.26	74.17	0.56	105.50	0.16	136.83	0.14
11.58	0.00	42.92	0.25	74.25	0.58	105.58	0.16	136.92	0.14
11.67	0.00	43.00	0.25	74.33	0.58	105.67	0.16	137.00	0.14
11.75	0.00	43.08	0.25	74.42	0.58	105.75	0.17	137.08	0.15
11.83	0.00	43.17	0.25	74.50	0.59	105.83	0.16	137.17	0.15
11.92	0.00	43.25	0.25	74.58	0.60	105.92	0.16	137.25	0.14
12.00	0.00	43.33	0.25	74.67	0.57	106.00	0.16	137.33	0.15
12.08	0.00	43.42	0.25	74.75	0.56	106.08	0.16	137.42	0.14
12.17	0.00	43.50	0.25	74.83	0.54	106.17	0.16	137.50	0.14
12.25	0.00	43.58	0.25	74.92	0.56	106.25	0.17	137.58	0.14
12.33	0.00	43.67	0.25	75.00	0.53	106.33	0.16	137.67	0.15
12.42	0.00	43.75	0.25	75.08	0.51	106.42	0.16	137.75	0.14
12.50	0.00	43.83	0.26	75.17	0.51	106.50	0.16	137.83	0.14
12.58	0.00	43.92	0.26	75.25	0.51	106.58	0.16	137.92	0.14
12.67	0.00	44.00	0.26	75.33	0.51	106.67	0.16	138.00	0.14
12.75	0.00	44.08	0.26	75.42	0.50	106.75	0.16	138.08	0.14
12.83	0.00	44.17	0.26	75.50	0.50	106.83	0.15	138.17	0.14
12.92	0.00	44.25	0.27	75.58	0.49	106.92	0.15	138.25	0.14
13.00	0.00	44.33	0.26	75.67	0.49	107.00	0.16	138.33	0.14
13.08	0.00	44.42	0.26	75.75	0.49	107.08	0.16	138.42	0.14
13.17	0.00	44.50	0.26	75.83	0.48	107.17	0.16	138.50	0.14
13.25	0.00	44.58	0.26	75.92	0.47	107.25	0.15	138.58	0.14
13.33	0.00	44.67	0.26	76.00	0.47	107.33	0.16	138.67	0.14
13.42	0.00	44.75	0.26	76.08	0.48	107.42	0.16	138.75	0.14
13.50	0.00	44.83	0.26	76.17	0.46	107.50	0.15	138.83	0.14
13.58	0.00	44.92	0.26	76.25	0.45	107.58	0.16	138.92	0.14
13.67	0.00	45.00	0.26	76.33	0.45	107.67	0.15	139.00	0.14
13.75	0.00	45.08	0.26	76.42	0.43	107.75	0.15	139.08	0.14
13.83	0.00	45.17	0.25	76.50	0.44	107.83	0.16	139.17	0.13
13.92	0.00	45.25	0.25	76.58	0.46	107.92	0.16	139.25	0.14
14.00	0.00	45.33	0.25	76.67	0.43	108.00	0.16	139.33	0.14
14.08	0.00	45.42	0.25	76.75	0.44	108.08	0.15	139.42	0.14
14.17	0.00	45.50	0.25	76.83	0.43	108.17	0.15	139.50	0.14
14.25	0.00	45.58	0.25	76.92	0.45	108.25	0.15	139.58	0.13
14.33	0.00	45.67	0.25	77.00	0.42	108.33	0.16	139.67	0.14
14.42	0.00	45.75	0.25	77.08	0.43	108.42	0.16	139.75	0.14
14.50	0.00	45.83	0.26	77.17	0.43	108.50	0.15	139.83	0.13
14.58	0.00	45.92	0.25	77.25	0.42	108.58	0.15	139.92	0.14
14.67	0.00	46.00	0.26	77.33	0.41	108.67	0.15	140.00	0.14
14.75	0.00	46.08	0.26	77.42	0.43	108.75	0.16	140.08	0.13
14.83	0.00	46.17	0.25	77.50	0.41	108.83	0.15	140.17	0.13

14.90	0.69	46.25	0.26	77.58	0.43	108.92	0.15	140.25	0.13
15.00	0.69	46.33	0.26	77.67	0.39	109.00	0.15	140.33	0.13
15.08	0.71	46.42	0.26	77.75	0.39	109.08	0.15	140.42	0.14
15.17	0.74	46.50	0.26	77.83	0.37	109.17	0.15	140.50	0.13
15.25	0.74	46.58	0.26	77.92	0.39	109.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12

19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11

23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10

27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12

24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11

28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.1		

Ultimate - SCUBE

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V V I SSSS U U A L (v 6.2.2018)

V V I SS U U A A L

V V I SS U U A A A A L

V V I SS U U A A L

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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\

f40dba5f-bcd5-4251-a5fe-6ae899643429\

Summary filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\

f40dba5f-bcd5-4251-a5fe-6ae899643429\

DATE: 04-10-2024 TIME: 01:25:37

USER:

COMMENTS: _____

** SIMULATION : 100yrHope_SCSII_6hr.stm **

READ STORM Filename: C:\Users\jannaormond\AppData\Local\Temp\

		5b66f7bc-e58d-45d3-b0f6-6b3e1edcbf8b\ff8cc32c									
		Ptotal=101.62 mm Comments: Mount Hope-6 hour SCS Distribution Desig									
		TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN		
		hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr		
		0.00	4.09	1.50	10.23	3.00	22.51	4.50	6.14		
		0.17	4.09	1.67	10.23	3.17	22.51	4.67	6.14		
		0.33	4.09	1.83	10.23	3.33	22.51	4.83	6.14		
		0.50	6.14	2.00	12.28	3.50	10.23	5.00	4.09		
		0.67	6.14	2.17	12.28	3.67	10.23	5.17	4.09		
		0.83	6.14	2.33	12.28	3.83	10.23	5.33	4.09		
		1.00	6.14	2.50	61.38	4.00	8.18	5.50	4.09		
		1.17	6.14	2.67	110.48	4.17	8.18	5.67	4.09		
		1.33	6.14	2.83	159.59	4.33	8.18				

CALIB			
NASHYD (5011)			
ID= 1 DT= 5.0 min			

Area	(ha)=	80.20	Curve Number (CN)= 65.0
Ia	(mm)=	8.00	# of Linear Res.(N)= 3.00
U.H. Tp	(hrs)=	0.85	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

		---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.787 (i)

TIME TO PEAK (hrs)= 3.833

RUNOFF VOLUME (mm)= 38.043

TOTAL RAINFALL (mm)= 101.620

RUNOFF COEFFICIENT = 0.374

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

		CALIB							
		STANDHYD (5012)		Area		(ha)= 39.40			
		ID= 1 DT= 5.0 min		Total Imp		(%)= 38.00		Dir. Conn.(%)= 24.00	
				IMPERVIOUS		PERVIOUS (i)			
		Surface Area		(ha)=		14.97		24.43	
		Dep. Storage		(mm)=		6.00		8.00	
		Average Slope		(%)=		1.00		1.00	
		Length		(m)=		512.51		40.00	
		Mannings n		=		0.013		0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

		---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN	
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs	mm/hr	
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14		
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14		
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14		
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14		
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14		
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14		
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09		
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09		
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09		
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09		
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09		
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09		
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09		
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09		
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09		
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09		
1.417	6.14	2.917	159.59	4.417	8.18				
1.500	6.14	3.000	159.59	4.500	8.18				

Max.Eff.Inten.(mm/hr)= 159.59 107.14

over (min) 5.00 15.00

Storage Coeff. (min)= 5.65 (ii) 14.10 (ii)

Unit Hyd. Tpeak (min)= 5.00 15.00

Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 3.93 4.06 7.301 (iii)

TIME TO PEAK (hrs)= 3.00 3.08 3.00

RUNOFF VOLUME (mm)= 95.62 43.76 56.20

TOTAL RAINFALL (mm)= 101.62 101.62 101.62

RUNOFF COEFFICIENT = 0.94 0.43 0.55

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 65.0 Ia = Dep. Storage (Above)

(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

		ADD HYD (0100)							
		1 + 2 = 3		AREA		QPEAK		TPEAK	
				(ha)		(cms)		(hrs)	
								R.V.	
								(mm)	
		ID1= 1 (5011):		80.20		3.787		3.83	
		+ ID2= 2 (5012):		39.40		7.301		3.00	
		ID = 3 (0100):		119.60		8.229		3.00	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

		ROUTE CHN(0502)							
		IN= 2---> OUT= 1		Routing time step (min)=		5.00			

		----- DATA FOR SECTION (1537.5) -----					
Distance	Elevation	Manning					
0.00	89.30	0.1100					
4.20	89.28	0.1100					
9.03	88.80	0.1100					
21.55	88.78	0.1100					
29.06	88.24	0.1100					
39.87	87.83	0.1100					
55.54	87.84	0.1100 /0.0700	Main Channel				
57.54	86.84	0.0700	Main Channel				
59.04	86.84	0.0700	Main Channel				
61.04	87.84	0.0700 /0.1100	Main Channel				
74.10	87.86	0.1100					
87.72	88.07	0.1100					
101.34	88.18	0.1100					
113.53	88.23	0.1100					
128.57	88.32	0.1100					
142.19	88.61	0.1100					

155.81	88.53	0.1100
183.05	88.85	0.1100
187.19	88.84	0.1100
211.21	88.88	0.1100

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.10	86.94	.202E+03	0.0	0.25	78.80	
0.20	87.04	.452E+03	0.1	0.37	52.91	
0.30	87.14	.749E+03	0.3	0.47	42.34	
0.40	87.24	.109E+04	0.5	0.55	36.26	
0.50	87.34	.149E+04	0.8	0.62	32.18	
0.60	87.44	.193E+04	1.1	0.68	29.19	
0.70	87.54	.241E+04	1.5	0.74	26.87	
0.80	87.64	.295E+04	2.0	0.79	25.01	
0.90	87.74	.353E+04	2.5	0.84	23.46	
1.00	87.84	.421E+04	3.1	0.89	22.39	
1.10	87.94	.849E+04	4.5	0.63	31.56	
1.21	88.05	.150E+05	7.1	0.56	35.43	
1.33	88.17	.233E+05	10.6	0.54	36.49	
1.44	88.28	.346E+05	15.5	0.53	37.18	
1.56	88.40	.484E+05	22.8	0.56	35.35	
1.67	88.51	.634E+05	32.1	0.60	32.90	
1.79	88.63	.807E+05	41.2	0.61	32.65	
1.90	88.74	.101E+06	54.6	0.64	30.77	
2.02	88.86	.124E+06	64.7	0.62	31.85	
<---- hydrograph ----> <-pipe / channel->						
		AREA	QPEAK	TPEAK	R.V.	
		(ha)	(cms)	(hrs)	(mm)	
INFLOW : ID= 2 (	0100)	119.60	8.23	3.00	44.03	1.25 0.55
OUTFLOW: ID= 1 (	0502)	119.60	5.08	3.83	44.02	1.13 0.61

CALIB			
STANDHYD (5022)	Area (ha)=	51.10	
ID= 1 DT= 5.0 min	Total Imp(%)=	48.00	Dir. Conn.(%)= 34.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	24.53	26.57
Dep. Storage	(mm)=	1.50	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	583.67	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		
Max.Eff.Inten.(mm/hr)=		159.59	105.55				
over (min)		5.00	15.00				
Storage Coeff. (min)=		6.11 (ii)	14.61 (ii)				
Unit Hyd. Tpeak (min)=		5.00	15.00				
Unit Hyd. peak (cms)=		0.19	0.08				
				TOTALS			
PEAK FLOW (cms)=		7.13	4.26	10.662 (iii)			
TIME TO PEAK (hrs)=		3.00	3.08	3.00			
RUNOFF VOLUME (mm)=		100.12	41.68	61.55			
TOTAL RAINFALL (mm)=		101.62	101.62	101.62			
RUNOFF COEFFICIENT =		0.99	0.41	0.61			

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0102)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0502):	119.60	5.084	3.83	44.02

+ ID2= 2 (5022): 51.10 10.662 3.00 61.55
=====

ID = 3 (0102): 170.70 13.583 3.00 49.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)			
IN= 2----> OUT= 1	Routing time step (min)=	5.00	
<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 / 0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 / 0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.17	84.38	.114E+03	0.1	0.34	18.34	
0.33	84.54	.269E+03	0.4	0.50	12.51	
0.50	84.71	.465E+03	0.8	0.62	10.07	
0.67	84.88	.703E+03	1.4	0.72	8.63	
0.83	85.04	.982E+03	2.1	0.81	7.65	
1.00	85.21	.130E+04	3.1	0.89	6.93	
1.21	85.42	.177E+04	5.0	1.06	5.87	
1.41	85.62	.234E+04	7.4	1.17	5.28	
1.62	85.83	.300E+04	10.2	1.27	4.89	
1.83	86.04	.376E+04	13.6	1.35	4.60	
2.03	86.24	.462E+04	17.6	1.42	4.37	
2.24	86.45	.560E+04	22.1	1.47	4.22	
2.45	86.66	.695E+04	27.6	1.48	4.20	
2.66	86.87	.925E+04	31.2	1.25	4.94	

<---- hydrograph ----> <-pipe / channel->							
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (	0102)	170.70	13.58	3.00	49.27	1.82	1.35
OUTFLOW: ID= 1 (	0503)	170.70	12.35	3.08	49.27	1.75	1.32

CALIB			
STANDHYD (5032)	Area (ha)=	13.80	
ID= 1 DT= 5.0 min	Total Imp(%)=	76.00	Dir. Conn.(%)= 67.00

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	10.49	3.31
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	303.32	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		

1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 145.90
over (min) 5.00 10.00
Storage Coeff. (min)= 4.12 (ii) 8.90 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.24 0.12

PEAK FLOW (cms)= 3.98 0.96
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 53.59
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.53

TOTALS
4.940 (iii)
3.00
81.75
101.62
0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0503):	170.70	12.355	3.08	49.27
+ ID2= 2 (5032):	13.80	4.940	3.00	81.75
=====				
ID = 3 (0104):	184.50	16.520	3.00	51.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->

Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<----- TRAVEL TIME TABLE ----->

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0104)	184.50	16.52	3.00	51.70	0.92	0.40
OUTFLOW: ID= 1 (0504)	184.50	12.78	3.17	51.70	0.88	0.37

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min

Area (ha)= 7.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 5.77 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 140.83
over (min) 5.00 10.00
Storage Coeff. (min)= 3.46 (ii) 8.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.26 0.12

PEAK FLOW (cms)= 2.18 0.55
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 50.74
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.50

TOTALS
2.728 (iii)
3.00
79.91
101.62
0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0504):	184.50	12.778	3.17	51.70
+ ID2= 2 (5042):	7.70	2.728	3.00	79.91
=====				
ID = 3 (0106):	192.20	13.694	3.08	52.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min

Area (ha)= 15.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 11.78 3.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 161.71
over (min) 5.00 10.00
Storage Coeff. (min)= 4.29 (ii) 9.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.23 0.12
TOTALS
PEAK FLOW (cms)= 4.44 1.27 5.713 (iii)
TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 95.62 60.49 83.68
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.60 0.82

Max.Eff.Inten.(mm/hr)= 159.59 137.17
over (min) 5.00 15.00
Storage Coeff. (min)= 5.19 (ii) 12.85 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08
TOTALS
PEAK FLOW (cms)= 4.37 3.36 7.217 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 100.12 53.16 69.59
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.99 0.52 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min
Area (ha)= 29.70
Total Imp(%)= 50.00
Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.85 14.85
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.97 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09

ROUTE CHN(0521)
IN= 2--> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) -----
Distance Elevation Manning
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900 / 0.0700 Main Channel
513.93 82.96 0.0700 Main Channel
526.85 83.23 0.0700 / 0.0900 Main Channel
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 83.00 .378E+02 0.0 0.11 83.81
0.09 83.05 .151E+03 0.0 0.17 52.79
0.14 83.09 .340E+03 0.1 0.22 40.29

0.18 83.14 .605E+03 0.3 0.27 33.26
0.23 83.18 .946E+03 0.5 0.32 28.66
0.27 83.23 .151E+04 0.9 0.33 27.77
0.32 83.27 .323E+04 1.8 0.31 29.51
0.37 83.32 .510E+04 3.2 0.34 26.44
0.42 83.37 .713E+04 5.0 0.38 23.61
0.46 83.42 .934E+04 7.3 0.42 21.44
0.51 83.47 .121E+05 10.0 0.45 20.23
0.56 83.52 .156E+05 13.4 0.47 19.44
0.61 83.57 .196E+05 17.7 0.49 18.52
0.66 83.61 .240E+05 22.8 0.52 17.49
0.71 83.66 .286E+05 28.4 0.54 16.75
0.75 83.71 .336E+05 34.7 0.56 16.14
0.80 83.76 .390E+05 41.8 0.58 15.55
0.85 83.81 .448E+05 49.8 0.60 14.99
0.90 83.86 .510E+05 58.8 0.63 14.46

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5202) 29.70 7.22 3.00 69.59 0.46 0.42
OUTFLOW: ID= 1 (0521) 29.70 3.93 3.17 69.58 0.39 0.36

ADD HYD (0113)
1 + 2 = 3
ID1= 1 (0521): 29.70 3.931 3.17 69.58
+ ID2= 2 (5212): 15.70 5.713 3.00 83.68
=====

ID = 3 (0113): 45.40 8.845 3.00 74.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3
ID1= 1 (0106): 192.20 13.694 3.08 52.83
+ ID2= 2 (0113): 45.40 8.845 3.00 74.45
=====

ID = 3 (0114): 237.60 21.769 3.00 56.96

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2--> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (553.6) -----
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100
69.13 79.02 0.1100
92.42 79.04 0.1100
98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 / 0.0700 Main Channel
336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 / 0.0900 Main Channel
394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.51 83.16 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70
0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74
1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

<---- hydrograph ----> <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.60 21.77 3.00 56.96 1.15 0.70
OUTFLOW: ID= 1 (0505) 237.60 20.93 3.08 56.96 1.13 0.69

CALIB
STANDHYD (5052) Area (ha)= 15.90
ID= 1 DT= 5.0 min Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 11.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 11.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 11.048 4.250 8.18 5.75 4.09
1.333 6.14 2.833 11.048 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 132.71
over (min) 5.00 10.00
Storage Coeff. (min)= 4.30 (ii) 9.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00

Unit Hyd. peak (cms)= 0.23 0.12
PEAK FLOW (cms)= 4.43 1.07 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 5.495 (iii)
RUNOFF VOLUME (mm)= 95.62 49.62 3.00
TOTAL RAINFALL (mm)= 101.62 101.62 79.52
RUNOFF COEFFICIENT = 0.94 0.49 0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)
1 + 2 = 3 AREA OPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0505): 237.60 20.929 3.08 56.96
+ ID2= 2 (5052): 15.90 5.495 3.00 79.52
===== ID = 3 (0108): 253.50 24.441 3.00 58.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (304.1) -----
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900
45.97 80.05 0.0900
65.23 79.93 0.0900
84.49 80.35 0.0900
113.49 80.02 0.0900
136.48 80.07 0.0900
188.81 79.81 0.0900
197.86 79.25 0.0900 /0.0700 Main Channel
200.70 78.22 0.0700 Main Channel
203.29 79.35 0.0700 /0.0900 Main Channel
204.01 79.67 0.0900
236.47 80.40 0.0900
277.80 80.48 0.0900

305.35 80.37 0.0900
346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 11.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 11.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 11.048 4.250 8.18 5.75 4.09
1.333 6.14 2.833 11.048 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 149.80
over (min) 5.00 10.00
Storage Coeff. (min)= 3.92 (ii) 8.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.24 0.12

PEAK FLOW (cms)= 3.28 0.88 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 4.160 (iii)
RUNOFF VOLUME (mm)= 95.62 54.10 3.00
TOTAL RAINFALL (mm)= 101.62 101.62 81.09
RUNOFF COEFFICIENT = 0.94 0.53 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)
1 + 2 = 3 AREA OPEAK TPEAK R.V.

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 78.34 .979E+01 0.0 0.23 21.53
0.23 78.45 .392E+02 0.0 0.37 13.56
0.34 78.56 .881E+02 0.1 0.48 10.35
0.46 78.68 .157E+03 0.3 0.58 8.54
0.57 78.79 .245E+03 0.6 0.67 7.36
0.68 78.91 .352E+03 0.9 0.76 6.52
0.80 79.02 .480E+03 1.4 0.84 5.88
0.91 79.13 .627E+03 1.9 0.92 5.38
1.03 79.25 .793E+03 2.7 0.99 4.98
1.15 79.37 .103E+04 3.8 1.09 4.55
1.28 79.50 .135E+04 5.2 1.16 4.28
1.40 79.62 .175E+04 7.1 1.20 4.12
1.52 79.75 .228E+04 9.3 1.21 4.08
1.65 79.87 .318E+04 11.7 1.10 4.52
1.77 80.00 .524E+04 15.8 0.90 5.52
1.90 80.12 .973E+04 24.3 0.74 6.69
2.02 80.24 .158E+05 39.7 0.75 6.62
2.15 80.37 .230E+05 59.2 0.77 6.46
2.27 80.49 .349E+05 90.3 0.77 6.44

<---- hydrograph ----> <-pipe / channel->
AREA OPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.50 24.44 3.00 58.37 1.90 0.74
OUTFLOW: ID= 1 (0506) 253.50 21.32 3.17 58.37 1.86 0.79

CALIB
STANDHYD (5062) Area (ha)= 11.70
ID= 1 DT= 5.0 min Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.78 2.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 279.28 40.00
Mannings n = 0.013 0.250

(ha) (cms) (hrs) (mm)
ID1= 1 (0506): 253.50 21.319 3.17 58.37
+ ID2= 2 (5062): 11.70 4.160 3.00 81.09

ID = 3 (0110): 265.20 22.582 3.17 59.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB |
| STANDHYD (5102) | Area (ha)= 1.70
| ID= 1 DT= 5.0 min | Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 125.18
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.20 (ii) 10.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.10

1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph <---->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5102)	1.70	0.51	3.00	72.37	0.10	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.37	3.00	72.34	0.07	0.24

| CALIB |
| STANDHYD (5112) | Area (ha)= 3.00
| ID= 1 DT= 5.0 min | Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		

TOTALS
PEAK FLOW (cms)= 0.39 0.14 0.507 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 47.19 72.37
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.46 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ROUTE CHN(0511) |
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100 /0.0700
69.13	79.02	0.0700
92.42	79.04	0.0700
98.70	80.89	0.0700 /0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81

1.500 6.14 | 3.000 159.59 | 4.500 8.18 |

Max.Eff.Inten.(mm/hr)= 159.59 142.77
over (min)= 5.00 15.00
Storage Coeff. (min)= 2.61 (ii) 10.14 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.10

TOTALS
PEAK FLOW (cms)= 0.77 0.24 0.972 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 53.17 77.79
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.52 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0117) |
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0511):	1.70	0.367	3.00	72.34
+ ID2= 2 (5112):	3.00	0.972	3.00	77.79
=====				
ID = 3 (0117):	4.70	1.339	3.00	75.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0512) |
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning
0.00	80.80	0.0900
9.73	80.46	0.0900
14.10	82.04	0.0900
17.18	82.28	0.0900
41.13	82.12	0.0900 /0.0700
46.88	79.71	0.0700
51.41	80.90	0.0700 /0.0900
94.29	80.56	0.0900
175.64	80.72	0.0900

192.09		80.85		0.0900	
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40
<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0117)	4.70	1.34	3.00	75.82	0.87 0.36
OUTFLOW: ID= 1 (0512)	4.70	0.82	3.08	75.75	0.76 0.45

CALIB	
STANDHYD (5122)	Area (ha)= 3.90
ID= 1 DT= 5.0 min	Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.65	1.25
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	161.25	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		
Max.Eff.Inten.(mm/hr)=		159.59	141.05				
over (min)		5.00	15.00				
Storage Coeff. (min)=		2.82 (ii)	10.39 (ii)				
Unit Hyd. Tpeak (min)=		5.00	15.00				
Unit Hyd. peak (cms)=		0.28	0.09				
				TOTALS			
PEAK FLOW (cms)=		0.98	0.31	1.247 (iii)			
TIME TO PEAK (hrs)=		3.00	3.08	3.00			
RUNOFF VOLUME (mm)=		95.62	52.94	77.27			
TOTAL RAINFALL (mm)=		101.62	101.62	101.62			
RUNOFF COEFFICIENT =		0.94	0.52	0.76			

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.822	3.08	75.75
+ ID2= 2 (5122):	3.90	1.247	3.00	77.27
=====				

ID = 3 (0119): 8.60 1.969 3.00 76.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.20	22.582	3.17	59.38
+ ID2= 2 (0119):	8.60	1.969	3.00	76.44
=====				
ID = 3 (0120):	273.80	23.855	3.17	59.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
NASHYD (6011)	Area (ha)= 44.10 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
	U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

- (i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6012)	Area (ha)= 11.00
ID= 1 DT= 5.0 min	Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.80	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		
Unit Hyd Qpeak (cms)=		2.027					
PEAK FLOW (cms)=		1.942 (i)					

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		
Max.Eff.Inten.(mm/hr)=		159.59	91.88				
over (min)		5.00	15.00				
Storage Coeff. (min)=		3.85 (ii)	12.84 (ii)				
Unit Hyd. Tpeak (min)=		5.00	15.00				
Unit Hyd. peak (cms)=		0.25	0.08				

PEAK FLOW (cms)= 0.76 1.16 1.726 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.35 48.35
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.48

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3
ID1= 1 (6011): 44.10 1.942 3.83 35.16
+ ID2= 2 (6012): 11.00 1.726 3.00 48.35
ID = 3 (0124): 55.10 2.327 3.50 37.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021) Area (ha)= 43.60 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09

0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 94.24
over (min) 5.00 15.00
Storage Coeff. (min)= 4.04 (ii) 12.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08
PEAK FLOW (cms)= 1.28 1.26 2.325 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 39.77 52.62
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.39 0.52

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3
ID1= 1 (6021): 43.60 1.734 4.00 35.16
+ ID2= 2 (6022): 12.90 2.325 3.00 52.62
ID = 3 (0125): 56.50 2.680 3.00 39.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3
ID1= 1 (0124): 55.10 2.327 3.50 37.79
+ ID2= 2 (0125): 56.50 2.680 3.00 39.14

0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.734 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 35.157
TOTAL RAINFALL (mm)= 101.620
RUNOFF COEFFICIENT = 0.346

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022) Area (ha)= 12.90
ID= 1 DT= 5.0 min Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09

ID = 3 (0126): 111.60 4.886 3.00 38.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (2135.9)
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700 Main Channel
130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33

2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 4.89 3.00 38.48 0.71 0.25
OUTFLOW: ID= 1 (0603) 111.60 3.29 4.50 38.47 0.66 0.23

CALIB
STANDHYD (6032)
ID= 1 DT= 5.0 min
Area (ha)= 34.60
Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 16.26 18.34
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 480.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09
1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 134.53
over (min) 5.00 15.00
Storage Coeff. (min)= 5.43 (ii) 13.15 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08
PEAK FLOW (cms)= 4.62 4.02
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 100.12 52.78
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.99 0.52
TOTALS
8.033 (iii)
3.00
67.93
101.62
0.67

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min
Area (ha)= 21.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.55 10.55
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 375.06 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 4.09 1.583 10.23 3.083 22.51 4.58 6.14
0.167 4.09 1.667 10.23 3.167 22.51 4.67 6.14
0.250 4.09 1.750 10.23 3.250 22.51 4.75 6.14
0.333 4.09 1.833 10.23 3.333 22.51 4.83 6.14
0.417 4.09 1.917 10.23 3.417 22.51 4.92 6.14
0.500 4.09 2.000 10.23 3.500 22.51 5.00 6.14
0.583 6.14 2.083 12.28 3.583 10.23 5.08 4.09
0.667 6.14 2.167 12.28 3.667 10.23 5.17 4.09
0.750 6.14 2.250 12.28 3.750 10.23 5.25 4.09
0.833 6.14 2.333 12.28 3.833 10.23 5.33 4.09
0.917 6.14 2.417 12.28 3.917 10.23 5.42 4.09
1.000 6.14 2.500 12.28 4.000 10.23 5.50 4.09

1.083 6.14 2.583 61.38 4.083 8.18 5.58 4.09
1.167 6.14 2.667 61.38 4.167 8.18 5.67 4.09
1.250 6.14 2.750 110.48 4.250 8.18 5.75 4.09
1.333 6.14 2.833 110.48 4.333 8.18 5.83 4.09
1.417 6.14 2.917 159.59 4.417 8.18
1.500 6.14 3.000 159.59 4.500 8.18

Max.Eff.Inten.(mm/hr)= 159.59 131.44
over (min) 5.00 15.00
Storage Coeff. (min)= 4.68 (ii) 12.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
PEAK FLOW (cms)= 3.14 2.30
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 100.12 50.86
TOTAL RAINFALL (mm)= 101.62 101.62
RUNOFF COEFFICIENT = 0.99 0.50
TOTALS
5.089 (iii)
3.00
68.10
101.62
0.67

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0603): 111.60 3.287 4.50 38.47
+ ID2= 2 (6032): 34.60 8.033 3.00 67.93
ID = 3 (0128): 146.20 8.917 3.00 45.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
3 + 2 = 1
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 3 (0128): 146.20 8.917 3.00 45.44
+ ID2= 2 (6102): 21.10 5.089 3.00 68.10
ID = 1 (0128): 167.30 14.006 3.00 48.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (1414.9) ----->
Distance Elevation Manning
0.00 86.75 0.0900
3.09 87.40 0.0900
18.33 87.41 0.0900
35.33 86.99 0.0900
73.84 86.75 0.0900
103.33 86.41 0.0900
120.33 86.11 0.0900
129.46 86.13 0.0900
143.37 85.32 0.0900
154.33 85.02 0.0900
161.57 85.09 0.0900
163.05 84.78 0.0900 /0.0700 Main Channel
166.55 83.78 0.0700 Main Channel
168.05 84.78 0.0700 /0.1100 Main Channel
172.02 85.29 0.1100
191.39 86.19 0.1100
270.18 85.78 0.1100
296.33 86.36 0.1100
324.34 86.68 0.1100
368.56 87.05 0.1100

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.17 83.95 .465E+02 0.0 0.03 432.88
0.33 84.11 .186E+03 0.0 0.04 272.70
0.50 84.28 .418E+03 0.0 0.05 208.11
0.67 84.45 .743E+03 0.1 0.06 171.79
0.83 84.61 .116E+04 0.1 0.08 148.04
1.00 84.78 .167E+04 0.2 0.09 131.10
1.20 84.98 .252E+04 0.4 0.10 110.62
1.41 85.19 .469E+04 0.6 0.09 121.59
1.61 85.39 .842E+04 1.1 0.09 126.63
1.81 85.59 .133E+05 1.8 0.09 121.99
2.01 85.79 .192E+05 2.7 0.10 116.68
2.22 86.00 .298E+05 4.0 0.09 125.45
2.42 86.20 .487E+05 5.6 0.08 143.80
2.62 86.40 .736E+05 9.0 0.08 137.02
2.82 86.60 .102E+06 13.1 0.09 130.82
3.03 86.81 .136E+06 18.1 0.09 125.42
3.23 87.01 .178E+06 24.4 0.09 121.07
3.43 87.21 .224E+06 34.2 0.10 108.80

3.63 87.41 .271E+06 44.8 0.11 100.89

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.30	14.01	3.00	48.30	2.86	0.09
OUTFLOW: ID= 1 (0604)	167.30	4.70	3.08	48.29	2.37	0.08

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min

Area (ha)= 24.00
Total Imp(%)= 78.00 Dir. Conn.(%)= 69.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 18.72 5.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 400.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 175.99

over (min) 5.00 10.00
Storage Coeff. (min)= 4.87 (ii) 9.43 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.22 0.12

TOTALS
PEAK FLOW (cms)= 7.01 1.86 8.868 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 63.99 85.81
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.63 0.84

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0604):	167.30	4.698	3.08	48.29
+ ID2= 2 (6042):	24.00	8.868	3.00	85.81
=====				
ID = 3 (0130):	191.30	13.183	3.00	53.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (801.4) -----

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 /0.0700 Main Channel

258.15 80.95 0.0700 Main Channel
259.65 81.95 0.0700 /0.1100 Main Channel
263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

----- TRAVEL TIME TABLE -----

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0130)	191.30	13.18	3.00	53.00	1.29	0.32
OUTFLOW: ID= 1 (0605)	191.30	6.57	3.25	52.99	1.05	0.35

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min

Area (ha)= 11.40
Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 8.21 3.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)= 159.59 155.13
over (min) 5.00 15.00
Storage Coeff. (min)= 3.89 (ii) 11.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS
PEAK FLOW (cms)= 3.05 0.87 3.805 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 95.62 57.95 81.31
TOTAL RAINFALL (mm)= 101.62 101.62 101.62
RUNOFF COEFFICIENT = 0.94 0.57 0.80

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0605):	191.30	6.569	3.25	52.99
+ ID2= 2 (6112):	11.40	3.805	3.00	81.31
=====				
ID = 3 (0139):	202.70	8.457	3.00	54.59

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6052)				
ID= 1 DT= 5.0 min				
	Area (ha)=	15.90		
	Total Imp(%)=	74.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.77	4.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	325.58	40.00
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	127.05
over (min)	5.00	10.00

Storage Coeff. (min)=	4.30 (ii)	9.30 (ii)	
Unit Hyd. Tpeak (min)=	5.00	10.00	
Unit Hyd. peak (cms)=	0.23	0.12	
PEAK FLOW (cms)=	4.43	1.02	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.00	5.445 (iii)
RUNOFF VOLUME (mm)=	95.62	47.46	3.00
TOTAL RAINFALL (mm)=	101.62	101.62	78.76
RUNOFF COEFFICIENT =	0.94	0.47	101.62
			0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0139):	202.70	8.457	3.00	54.59
+ ID2= 2 (6052):	15.90	5.445	3.00	78.76
=====				
ID = 3 (0132):	218.60	13.902	3.00	56.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) ----->			
Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 /0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 /0.1100	Main Channel

132.18	79.61	0.1100
139.34	79.23	0.1100
144.67	79.43	0.1100
149.63	79.98	0.1100
153.42	79.79	0.1100
158.56	80.58	0.1100
176.89	81.15	0.1100

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	119.48
over (min)	5.00	15.00
Storage Coeff. (min)=	3.18 (ii)	11.27 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.27	0.09

PEAK FLOW (cms)=	1.42	0.40	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	1.761 (iii)
RUNOFF VOLUME (mm)=	95.62	46.34	3.00
TOTAL RAINFALL (mm)=	101.62	101.62	73.94
RUNOFF COEFFICIENT =	0.94	0.46	101.62
			0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ---->				<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.60	13.90	56.35	0.95	0.79
OUTFLOW: ID= 1 (0530)	218.60	10.96	56.34	0.85	0.76

CALIB				
STANDHYD (5302)				
ID= 1 DT= 5.0 min				
	Area (ha)=	5.80		
	Total Imp(%)=	66.00	Dir. Conn.(%)=	56.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.83	1.97
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	196.64	40.00


```
| ADD HYD ( 0134)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0530): 218.60 10.965 3.08 56.34
+ ID2= 2 ( 5302): 5.80 1.761 3.00 73.94
=====
ID = 3 ( 0134): 224.40 11.905 3.00 56.80
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ADD HYD ( 0135)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0120): 273.80 23.855 3.17 59.91
+ ID2= 2 ( 0134): 224.40 11.905 3.00 56.80
=====
ID = 3 ( 0135): 498.20 35.454 3.08 58.51
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| ROUTE CHN( 0507)|
| IN= 2----> OUT= 1 |
-----
Routing time step (min)'= 5.00
```

```
<----- DATA FOR SECTION ( 40.0) ----->
Distance Elevation Manning
0.00 79.36 0.0900
7.45 79.32 0.0900
13.77 79.27 0.0900
20.24 79.24 0.0900
27.28 79.26 0.0900
34.16 79.13 0.0900
40.79 79.05 0.0900
47.58 79.05 0.0900
54.30 79.07 0.0900
60.87 79.24 0.0900
71.39 79.48 0.0900
73.53 78.96 0.0900
76.96 78.07 0.0900
82.21 77.08 0.0900 /0.0700 Main Channel
85.82 76.28 0.0700 Main Channel
89.97 76.89 0.0700 Main Channel
91.35 77.38 0.0700 /0.0900 Main Channel
95.27 78.68 0.0900
98.44 79.63 0.0900
102.89 79.89 0.0900
```

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

```
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 ( 0135) 498.20 35.45 3.08 58.51 2.72 1.05
OUTFLOW: ID= 1 ( 0507) 498.20 31.14 3.33 58.51 2.57 1.01
```

```
| CALIB
| STANDHYD ( 5072)|
| ID= 1 DT= 5.0 min |
-----
Area (ha)= 48.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 36.00
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	24.45	24.45
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	570.96	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14				

0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09
1.417	6.14	2.917	159.59	4.417	8.18		
1.500	6.14	3.000	159.59	4.500	8.18		

Max.Eff.Inten.(mm/hr)=	159.59	139.84	
over (min)	5.00	15.00	
Storage Coeff. (min)=	6.03 (ii)	13.63 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.19	0.08	
PEAK FLOW (cms)=	7.24	5.52	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	11.930 (iii)
RUNOFF VOLUME (mm)=	95.62	55.09	69.68
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.54	0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
| ADD HYD ( 0122)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0507): 498.20 31.144 3.33 58.51
+ ID2= 2 ( 5072): 48.90 11.930 3.00 69.68
=====
ID = 3 ( 0122): 547.10 37.620 3.17 59.51
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
| CALIB
| STANDHYD ( 5402)|
| ID= 1 DT= 5.0 min |
-----
Area (ha)= 9.40
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00
```

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	4.70	4.70
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	250.33	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	4.09	1.583	10.23	3.083	22.51	4.58	6.14				
0.167	4.09	1.667	10.23	3.167	22.51	4.67	6.14				
0.250	4.09	1.750	10.23	3.250	22.51	4.75	6.14				
0.333	4.09	1.833	10.23	3.333	22.51	4.83	6.14				
0.417	4.09	1.917	10.23	3.417	22.51	4.92	6.14				
0.500	4.09	2.000	10.23	3.500	22.51	5.00	6.14				
0.583	6.14	2.083	12.28	3.583	10.23	5.08	4.09				
0.667	6.14	2.167	12.28	3.667	10.23	5.17	4.09				
0.750	6.14	2.250	12.28	3.750	10.23	5.25	4.09				
0.833	6.14	2.333	12.28	3.833	10.23	5.33	4.09				
0.917	6.14	2.417	12.28	3.917	10.23	5.42	4.09				
1.000	6.14	2.500	12.28	4.000	10.23	5.50	4.09				
1.083	6.14	2.583	61.38	4.083	8.18	5.58	4.09				
1.167	6.14	2.667	61.38	4.167	8.18	5.67	4.09				
1.250	6.14	2.750	110.48	4.250	8.18	5.75	4.09				
1.333	6.14	2.833	110.48	4.333	8.18	5.83	4.09				
1.417	6.14	2.917	159.59	4.417	8.18						
1.500	6.14	3.000	159.59	4.500	8.18						

Max.Eff.Inten.(mm/hr)=	159.59	120.33	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.67 (ii)	11.74 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.25	0.09	

PEAK FLOW (cms)=	1.43	0.95	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	2.231 (iii)
RUNOFF VOLUME (mm)=	95.62	46.47	63.67
TOTAL RAINFALL (mm)=	101.62	101.62	101.62
RUNOFF COEFFICIENT =	0.94	0.46	0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505) | AREA (ha)= 30.00
ID= 1 DT= 5.0min | QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 402.14

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17

2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17

7.00	0.00	38.42	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.65	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13	70.25	0.70	101.58	0.19	132.92	0.16
7.67	0.00	39.00	0.13	70.33	0.74	101.67	0.20	133.00	0.17
7.75	0.00	39.08	0.14	70.42	0.73	101.75	0.19	133.08	0.16
7.83	0.00	39.17	0.14	70.50	0.74	101.83	0.18	133.17	0.16
7.92	0.00	39.25	0.14	70.58	0.74	101.92	0.19	133.25	0.16
8.00	0.00	39.33	0.14	70.67	0.74	102.00	0.19	133.33	0.15
8.08	0.00	39.42	0.14	70.75	0.75	102.08	0.19	133.42	0.16
8.17	0.00	39.50	0.15	70.83	0.75	102.17	0.19	133.50	0.16
8.25	0.00	39.58	0.16	70.92	0.74	102.25	0.18	133.58	0.17
8.33	0.00	39.67	0.16	71.00	0.74	102.33	0.18	133.67	0.16
8.42	0.00	39.75	0.16	71.08	0.75	102.42	0.19	133.75	0.15
8.50	0.00	39.83	0.16	71.17	0.77	102.50	0.19	133.83	0.16
8.58	0.00	39.92	0.17	71.25	0.76	102.58	0.19	133.92	0.16
8.67	0.00	40.00	0.17	71.33	0.76	102.67	0.18	134.00	0.16
8.75	0.00	40.08	0.17	71.42	0.77	102.75	0.20	134.08	0.16
8.83	0.00	40.17	0.17	71.50	0.76	102.83	0.18	134.17	0.15
8.92	0.00	40.25	0.18	71.58	0.77	102.92	0.18	134.25	0.16
9.00	0.00	40.33	0.18	71.67	0.76	103.00	0.17	134.33	0.16
9.08	0.00	40.42	0.18	71.75	0.76	103.08	0.17	134.42	0.16
9.17	0.00	40.50	0.18	71.83	0.78	103.17	0.18	134.50	0.16
9.25	0.00	40.58	0.19	71.92	0.77	103.25	0.18	134.58	0.15
9.33	0.00	40.67	0.19	72.00	0.76	103.33	0.17	134.67	0.16
9.42	0.00	40.75	0.19	72.08	0.74	103.42	0.17	134.75	0.15
9.50	0.00	40.83	0.19	72.17	0.75	103.50	0.17	134.83	0.15
9.58	0.00	40.92	0.19	72.25	0.74	103.58	0.18	134.92	0.16
9.67	0.00	41.00	0.19	72.33	0.72	103.67	0.18	135.00	0.15
9.75	0.00	41.08	0.19	72.42	0.70	103.75	0.18	135.08	0.15
9.83	0.00	41.17	0.20	72.50	0.70	103.83	0.18	135.17	0.15
9.92	0.00	41.25	0.20	72.58	0.69	103.92	0.19	135.25	0.15
10.00	0.00	41.33	0.21	72.67	0.70	104.00	0.17	135.33	0.15
10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.15
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.14
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15
10.67	0.00	42.00	0.26	73.33	0.62	104.67	0.16	136.00	0.15
10.75	0.00	42.08	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15
10.92	0.00	42.25	0.26	73.58	0.60	104.92	0.16	136.25	0.15
11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15

15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12

19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11

23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.14	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.10
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.10
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.10
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10

hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms	4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26		
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20			4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26		
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20			4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27		
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20			4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27		
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20			4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27		
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20			4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27		
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20			4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28		
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20			4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28		
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20			4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28		
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21			4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29		
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21			4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29		
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21			5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29		
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21			5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29		
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21			5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29		
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21			5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29		
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21			5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29		
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21			5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29		
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21			5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29		
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22			5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29		
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22			5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29		
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22			5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29		
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22			5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29		
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22			5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29		
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22			6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29		
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23			6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29		
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23			6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29		
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23			6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29		
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23			6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29		
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23			6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29		
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24			6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29		
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24			6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28		
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24			6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28		
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24			6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28		
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24			6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28		
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24			6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28		
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25			7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28		
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25			7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28		
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25			7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28		
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25			7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28		
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25			7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28		
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25			7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28		
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25			7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27		
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25			7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27		
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25			7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27		
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26			7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27		
3.67	0.00	34.92	0.14	66.17																			

16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14

20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12

24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.1		

***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\V02\voin.dat

Output filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\58ebec05-56f8-4fd1-be9a-82e42f3f7ea5\

Summary filename:

C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\58ebec05-56f8-4fd1-be9a-82e42f3f7ea5\

DATE: 04-10-2024

TIME: 01:25:32

USER:

COMMENTS: _____

** SIMULATION : 10yrII6.stm **

READ STORM		Filename: C:\Users\jannaormond\AppData\Local\Temp\5b66f7bc-e58d-45d3-b0f6-6b3e1edcbf8b\62f6350e					
Total= 67.60 mm		Comments: Mount Hope-6 hour SCS Distribution Design					
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	2.70	1.50	6.76	3.00	14.87	4.50	4.06
0.17	2.70	1.67	6.76	3.17	14.87	4.67	4.06
0.33	2.70	1.83	6.76	3.33	14.87	4.83	4.06
0.50	4.06	2.00	8.11	3.50	6.76	5.00	2.70
0.67	4.06	2.17	8.11	3.67	6.76	5.17	2.70
0.83	4.06	2.33	8.11	3.83	6.76	5.33	2.70
1.00	4.06	2.50	40.56	4.00	5.41	5.50	2.70
1.17	4.06	2.67	73.01	4.17	5.41	5.67	2.70
1.33	4.06	2.83	105.46	4.33	5.41	5.83	2.70

CALIB	Area (ha)=	Curve Number (CN)=
NASHYD (5011)	80.20	65.0
ID= 1 DT= 5.0 min	Ia (mm)= 8.00	# of Linear Res. (N)= 3.00
	U.H. Tp(hrs)= 0.85	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.741 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 18.089
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.268

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB			
STANDHYD (5012)	Area (ha)=	39.40	
ID= 1 DT= 5.0 min	Total Imp(%)=	38.00	Dir. Conn.(%)= 24.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	14.97	24.43
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00

Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70
Max.Eff.Inten.(mm/hr)=	105.46	44.47					
over (min)	5.00	20.00					
Storage Coeff. (min)=	6.67 (ii)	18.68 (ii)					
Unit Hyd. Tpeak (min)=	5.00	20.00					
Unit Hyd. peak (cms)=	0.18	0.06					
			TOTALS				
PEAK FLOW (cms)=	2.53	1.64	3.612 (iii)				
TIME TO PEAK (hrs)=	3.00	3.25					
RUNOFF VOLUME (mm)=	61.60	21.60	31.20				
TOTAL RAINFALL (mm)=	67.60	67.60	67.60				
RUNOFF COEFFICIENT =	0.91	0.32	0.46				

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	1.741	3.92	18.09
+ ID2= 2 (5012):	39.40	3.612	3.00	31.20
ID = 3 (0100):	119.60	3.973	3.00	22.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)	Routing time step (min)'= 5.00		
IN= 2----> OUT= 1			
----- DATA FOR SECTION (1537.5) ----->			
Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39

1.10	87.94	.849E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0100)	119.60	3.97	3.00	22.41	1.06
OUTFLOW: ID= 1 (0502)	119.60	2.86	3.58	22.41	0.96

CALIB	
STANDHYD (5022)	
ID= 1 DT= 5.0 min	

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 24.53	26.57	
Dep. Storage	(mm)= 1.50	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 583.67	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70

1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	43.34	
over (min)	5.00	20.00	
Storage Coeff. (min)=	7.21 (ii)	19.35 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.17	0.06	
PEAK FLOW (cms)=	4.58	1.71	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.25	5.699 (iii)
RUNOFF VOLUME (mm)=	66.10	20.43	35.95
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT	= 0.98	0.30	0.53

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0102)				
1 + 2 = 3				
ID1= 1 (0502):	119.60	2.858	3.58	22.41
+ ID2= 2 (5022):	51.10	5.699	3.00	35.95
ID = 3 (0102):	170.70	7.319	3.00	26.46

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)	
IN= 2---> OUT= 1	Routing time step (min)'= 5.00

----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 / 0.0700	Main Channel
127.36	84.21	0.0700	Main Channel

128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 / 0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0102)	170.70	7.32	3.00	26.46	1.41
OUTFLOW: ID= 1 (0503)	170.70	6.58	3.08	26.46	1.34

ID= 1 DT= 5.0 min	Total Imp(%)= 76.00	Dir. Conn.(%)= 67.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 10.49	3.31	
Dep. Storage	(mm)= 6.00	8.00	
Average Slope	(%)= 1.00	1.00	
Length	(m)= 303.32	40.00	
Mannings n	= 0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	76.59	
over (min)	5.00	15.00	
Storage Coeff. (min)=	4.87 (ii)	14.53 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.22	0.08	
PEAK FLOW (cms)=	2.59	0.38	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	2.901 (iii)
RUNOFF VOLUME (mm)=	61.60	27.81	50.45
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT	= 0.91	0.41	0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)

CALIB	
STANDHYD (5032)	
Area (ha)= 13.80	

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0503):	170.70	6.580	3.08	26.46
+ ID2= 2 (5032):	13.80	2.901	3.00	50.45
=====				
ID = 3 (0104):	184.50	9.040	3.00	28.26

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)		Routing time step (min)'= 5.00	
IN= 2--> OUT= 1			
<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
19.10	82.03	0.0900	
29.01	83.14	0.0900	
40.83	82.56	0.0900	
81.51	82.27	0.0900	
122.18	82.68	0.0900	
169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00

0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ---->					<-pipe / channel-->	
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0104)	184.50	9.04	3.00	28.26	0.82	0.35
OUTFLOW: ID= 1 (0504)	184.50	6.70	3.17	28.25	0.79	0.33

CALIB		Area (ha)= 7.70	
STANDHYD (5042)		Total Imp(%)= 75.00	
ID= 1 DT= 5.0 min		Dir. Conn.(%)= 65.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	5.77	1.92
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	226.57	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

<---- TRANSFORMED HYETOGRAPH ---->							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06

0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70
Max.Eff.Inten.(mm/hr)= 105.46 72.79							
over (min)= 5.00 15.00							
Storage Coeff. (min)= 4.09 (ii) 13.95 (ii)							
Unit Hyd. Tpeak (min)= 5.00 15.00							
Unit Hyd. peak (cms)= 0.24 0.08							
TOTALS							
PEAK FLOW (cms)= 1.42 0.21 1.600 (iii)							
TIME TO PEAK (hrs)= 3.00 3.08 3.00							
RUNOFF VOLUME (mm)= 61.60 26.01 49.14							
TOTAL RAINFALL (mm)= 67.60 67.60 67.60							
RUNOFF COEFFICIENT = 0.91 0.38 0.73							

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0504):	184.50	6.702	3.17	28.25
+ ID2= 2 (5042):	7.70	1.600	3.00	49.14
=====				
ID = 3 (0106):	192.20	7.226	3.17	29.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB		Area (ha)= 15.70	
STANDHYD (5212)		Total Imp(%)= 75.00	
ID= 1 DT= 5.0 min		Dir. Conn.(%)= 66.00	

		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	11.78	3.93
Dep. Storage	(mm)=	6.00	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	323.52	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

<---- TRANSFORMED HYETOGRAPH ---->							
TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	14.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	14.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	14.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	14.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	14.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	14.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 88.37	
over (min)= 5.00 15.00	
Storage Coeff. (min)= 5.06 (ii) 14.19 (ii)	
Unit Hyd. Tpeak (min)= 5.00 15.00	
Unit Hyd. peak (cms)= 0.21 0.08	
TOTALS	
PEAK FLOW (cms)= 2.89 0.54 3.333 (iii)	
TIME TO PEAK (hrs)= 3.00 3.08 3.00	
RUNOFF VOLUME (mm)= 61.60 32.42 51.68	
TOTAL RAINFALL (mm)= 67.60 67.60 67.60	
RUNOFF COEFFICIENT = 0.91 0.48 0.76	

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min

Area (ha)= 29.70
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.85 14.85
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.97 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 71.73
over (min)= 5.00 20.00
Storage Coeff. (min)= 6.12 (ii) 16.05 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.06

TOTALS
PEAK FLOW (cms)= 2.82 1.47 3.834 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 66.10 27.47 40.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60

RUNOFF COEFFICIENT = 0.98 0.41 0.61

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0521)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) -----
Distance Elevation Manning
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900 /0.0700 Main Channel
513.93 82.96 0.0700 Main Channel
526.85 83.23 0.0700 /0.0900 Main Channel
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 83.00 .378E+02 0.0 0.11 83.81
0.09 83.05 .151E+03 0.0 0.17 52.79
0.14 83.09 .340E+03 0.1 0.22 40.29
0.18 83.14 .605E+03 0.3 0.27 33.26
0.23 83.18 .946E+03 0.5 0.32 28.66
0.27 83.23 .151E+04 0.9 0.33 27.77
0.32 83.27 .323E+04 1.8 0.31 29.51
0.37 83.32 .510E+04 3.2 0.34 26.44
0.42 83.37 .713E+04 5.0 0.38 23.61
0.46 83.42 .934E+04 7.3 0.42 21.44
0.51 83.47 .121E+05 10.0 0.45 20.23
0.56 83.52 .156E+05 13.4 0.47 19.44
0.61 83.57 .196E+05 17.7 0.49 18.52
0.66 83.61 .240E+05 22.8 0.52 17.49
0.71 83.66 .286E+05 28.4 0.54 16.75
0.75 83.71 .336E+05 34.7 0.56 16.14
0.80 83.76 .390E+05 41.8 0.58 15.55
0.85 83.81 .448E+05 49.8 0.60 14.99
0.90 83.86 .510E+05 58.8 0.63 14.46

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5202) 29.70 3.83 3.00 40.99 0.38 0.36
OUTFLOW : ID= 1 (0521) 29.70 1.93 3.25 40.98 0.32 0.31

ADD HYD (0113)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0521): 29.70 1.933 3.25 40.98
+ ID2= 2 (5212): 15.70 3.333 3.00 51.68
=====

ID = 3 (0113): 45.40 4.917 3.00 44.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 192.20 7.226 3.17 29.09
+ ID2= 2 (0113): 45.40 4.917 3.00 44.68
=====

ID = 3 (0114): 237.60 11.754 3.00 32.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (553.6) -----
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100
69.13 79.02 0.1100
92.42 79.04 0.1100
98.70 80.89 0.1100
128.88 81.13 0.1100
199.00 81.23 0.1100
266.11 81.68 0.1100
306.94 81.73 0.1100
331.74 81.55 0.1100 /0.0700 Main Channel

336.74 80.15 0.0700 Main Channel
346.34 81.64 0.0700 /0.0900 Main Channel
394.77 81.68 0.0900
431.64 81.44 0.0900
477.44 82.08 0.0900
481.25 82.81 0.0900
501.21 83.16 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .418E+03 0.4 0.15 18.59
0.23 79.25 .899E+03 1.3 0.25 11.41
0.35 79.36 .140E+04 2.7 0.33 8.70
0.46 79.48 .191E+04 4.4 0.39 7.22
0.58 79.59 .244E+04 6.5 0.46 6.26
0.69 79.71 .299E+04 8.9 0.51 5.58
0.81 79.82 .355E+04 11.7 0.56 5.08
0.92 79.94 .413E+04 14.7 0.61 4.68
1.04 80.05 .472E+04 18.1 0.65 4.36
1.15 80.17 .533E+04 21.7 0.70 4.09
1.27 80.28 .598E+04 25.7 0.74 3.88
1.38 80.40 .666E+04 29.7 0.76 3.74
1.50 80.51 .740E+04 33.7 0.78 3.67
1.61 80.63 .822E+04 38.1 0.79 3.59
1.73 80.74 .909E+04 43.1 0.81 3.52
1.84 80.86 .100E+05 48.6 0.83 3.45
1.96 80.97 .111E+05 48.4 0.74 3.83
2.07 81.09 .128E+05 43.8 0.59 4.86
2.19 81.21 .155E+05 40.6 0.45 6.35

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.60 11.75 3.00 32.07 0.81 0.56
OUTFLOW : ID= 1 (0505) 237.60 11.04 3.08 32.07 0.78 0.55

CALIB
STANDHYD (5052)
ID= 1 DT= 5.0 min

Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.40
over (min) 5.00 20.00
Storage Coeff. (min)= 5.08 (ii) 15.93 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.07

TOTALS
PEAK FLOW (cms)= 2.88 0.39 3.143 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 25.27 48.88
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.37 0.72

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0108)|

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0505):	237.60	11.037	3.08	32.07
+ ID2= 2 (5052):	15.90	3.143	3.00	48.88
=====				
ID = 3 (0108):	253.50	13.088	3.00	33.12

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0506)|
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->			
Distance	Elevation	Manning	
0.00	81.42	0.0900	
7.45	81.36	0.0900	
32.34	80.38	0.0900	
45.97	80.05	0.0900	
65.23	79.93	0.0900	
84.49	80.35	0.0900	
113.49	80.02	0.0900	
136.48	80.07	0.0900	
188.81	79.81	0.0900	
197.86	79.25	0.0900 /0.0700	Main Channel
200.70	78.22	0.0700	Main Channel
203.29	79.35	0.0700 /0.0900	Main Channel
204.01	79.67	0.0900	
236.47	80.40	0.0900	
277.80	80.48	0.0900	
305.35	80.37	0.0900	
346.67	80.41	0.0900	
387.99	80.33	0.0900	
415.54	80.53	0.0900	
447.88	80.49	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28

1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44
<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0108)	253.50	13.09	3.00	33.12	1.69
OUTFLOW: ID= 1 (0506)	253.50	12.04	3.17	33.12	1.66

| CALIB
| STANDHYD (5062)|
| ID= 1 DT= 5.0 min |

Area (ha)= 11.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.78 2.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 279.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70

1 + 2 = 3	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0506):	253.50	12.042	3.17	33.12
+ ID2= 2 (5062):	11.70	2.430	3.00	49.90
=====				
ID = 3 (0110):	265.20	13.070	3.08	33.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (5102)|
| ID= 1 DT= 5.0 min |

Area (ha)= 1.70
Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 53.29
over (min) 5.00 15.00
Storage Coeff. (min)= 2.60 (ii) 13.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.29 0.08

TOTALS

PEAK FLOW (cms)= 0.26 0.06 0.306 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 23.76 43.43
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.35 0.64

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100 / 0.0700	Main Channel
69.13	79.02	0.0700	Main Channel
92.42	79.04	0.0700	Main Channel
98.70	80.89	0.0700 / 0.1100	Main Channel
128.88	81.13	0.1100	
199.00	81.23	0.1100	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

<---- hydrograph ----> <-pipe / channel->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5102)	1.70	0.31	3.00	43.43	0.06	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.22	3.00	43.42	0.04	0.24

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 74.74
over (min) 5.00 15.00
Storage Coeff. (min)= 3.08 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.27 0.08

TOTALS

PEAK FLOW (cms)= 0.50 0.11 0.595 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 61.60 27.53 47.29
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.41 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.

(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)
1 + 2 = 3

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0511):	1.70	0.222	3.00	43.42
+ ID2= 2 (5112):	3.00	0.595	3.00	47.29
=====				
ID = 3 (0117):	4.70	0.817	3.00	45.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->

Distance	Elevation	Manning	
0.00	80.80	0.0900	
9.73	80.46	0.0900	
14.10	82.04	0.0900	
17.18	82.28	0.0900	
41.13	82.12	0.0900 / 0.0700	Main Channel
46.88	79.71	0.0700	Main Channel
51.41	80.90	0.0700 / 0.0900	Main Channel
94.29	80.56	0.0900	
175.64	80.72	0.0900	
192.09	80.85	0.0900	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64

2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

		<---- hydrograph ---->				<-pipe / channel->	
		AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
		(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (	0117)	4.70	0.82	3.00	45.89	0.75	0.45
OUTFLOW: ID= 1 (	0512)	4.70	0.50	3.08	45.83	0.63	0.40

Max.Eff.Inten.(mm/hr)=	105.46	73.73
over (min)	5.00	15.00
Storage Coeff. (min)=	3.33 (ii)	13.15 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.26	0.08

PEAK FLOW (cms)=	0.64	0.15	0.761 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	61.60	27.37	46.88
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.40	0.69

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.501	3.08	45.83
+ ID2= 2 (5122):	3.90	0.761	3.00	46.88
=====				
ID = 3 (0119):	8.60	1.226	3.00	46.30

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.20	13.070	3.08	33.86
+ ID2= 2 (0119):	8.60	1.226	3.00	46.30
=====				
ID = 3 (0120):	273.80	14.065	3.00	34.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6011)				
ID= 1 DT= 5.0 min				
Area	(ha)=	44.10	Curve Number (CN)=	62.0
Ia	(mm)=	8.00	# of Linear Res.(N)=	3.00

U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)=	0.881 (i)
TIME TO PEAK (hrs)=	3.833
RUNOFF VOLUME (mm)=	16.500
TOTAL RAINFALL (mm)=	67.600
RUNOFF COEFFICIENT =	0.244

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)=	105.46	37.03
over (min)	5.00	20.00
Storage Coeff. (min)=	4.55 (ii)	17.48 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.23	0.06

PEAK FLOW (cms)=	0.50	0.45	0.795 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	61.60	19.00	25.82
TOTAL RAINFALL (mm)=	67.60	67.60	67.60
RUNOFF COEFFICIENT =	0.91	0.28	0.38

TOTALS

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0124)|
1 + 2 = 3
ID1= 1 (6011): 44.10 0.881 3.83 16.50
+ ID2= 2 (6012): 11.00 0.795 3.00 25.82
=====

ID = 3 (0124): 55.10 1.120 3.50 18.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (6021)|
ID= 1 DT= 5.0 min
Area (ha)= 43.60 Curve Number (CN)= 62.0
Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.789 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 16.500
TOTAL RAINFALL (mm)= 67.600
RUNOFF COEFFICIENT = 0.244

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (6022)|
ID= 1 DT= 5.0 min
Area (ha)= 12.90
Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.70 1.583 6.76 3.083 14.87 4.58 4.06
0.167 2.70 1.667 6.76 3.167 14.87 4.67 4.06
0.250 2.70 1.750 6.76 3.250 14.87 4.75 4.06
0.333 2.70 1.833 6.76 3.333 14.87 4.83 4.06
0.417 2.70 1.917 6.76 3.417 14.87 4.92 4.06
0.500 2.70 2.000 6.76 3.500 14.87 5.00 4.06
0.583 4.06 2.083 8.11 3.583 6.76 5.08 2.70
0.667 4.06 2.167 8.11 3.667 6.76 5.17 2.70
0.750 4.06 2.250 8.11 3.750 6.76 5.25 2.70
0.833 4.06 2.333 8.11 3.833 6.76 5.33 2.70
0.917 4.06 2.417 8.11 3.917 6.76 5.42 2.70
1.000 4.06 2.500 8.11 4.000 6.76 5.50 2.70
1.083 4.06 2.583 40.56 4.083 5.41 5.58 2.70
1.167 4.06 2.667 40.56 4.167 5.41 5.67 2.70
1.250 4.06 2.750 73.01 4.250 5.41 5.75 2.70
1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 38.11
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.77 (ii) 17.55 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS
PEAK FLOW (cms)= 0.83 0.49 1.157 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 19.26 28.99
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.28 0.43

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0125)|
1 + 2 = 3
ID1= 1 (6021): 43.60 0.789 4.00 16.50
+ ID2= 2 (6022): 12.90 1.157 3.00 28.99
=====

ID = 3 (0125): 56.50 1.292 3.00 19.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0126)|
1 + 2 = 3
ID1= 1 (0124): 55.10 1.120 3.50 18.36
+ ID2= 2 (0125): 56.50 1.292 3.00 19.35
=====

ID = 3 (0126): 111.60 2.273 3.00 18.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0603)|
IN= 2--> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700 Main Channel

130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 2.27 3.00 18.86 0.60 0.22
OUTFLOW: ID= 1 (0603) 111.60 1.51 4.58 18.86 0.55 0.21

| CALIB
| STANDHYD (6032)|
ID= 1 DT= 5.0 min
Area (ha)= 34.60
Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 16.26 18.34

Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 480.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 59.29
over (min) 5.00 20.00
Storage Coeff. (min)= 6.41 (ii) 17.12 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

TOTALS

PEAK FLOW (cms)= 2.98 1.72 4.160 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 66.10 27.22 39.66
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.98 0.40 0.59

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min
Area (ha)= 21.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.55 10.55
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 375.06 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 57.22
over (min) 5.00 20.00
Storage Coeff. (min)= 5.53 (ii) 16.39 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

TOTALS

PEAK FLOW (cms)= 2.03 0.97 2.701 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 66.10 26.01 40.04
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.98 0.38 0.59

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0603):	111.60	1.507	4.58	18.86
+ ID2= 2 (6032):	34.60	4.160	3.00	39.66
=====				
ID = 3 (0128):	146.20	4.569	3.00	23.78

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	146.20	4.569	3.00	23.78
+ ID2= 2 (6102):	21.10	2.701	3.00	40.04
=====				
ID = 1 (0128):	167.30	7.270	3.00	25.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700
166.55	83.78	0.0700

Main Channel
Main Channel

168.05 84.78 0.0700 / 0.1100 Main Channel
172.02 85.29 0.1100
191.39 86.19 0.1100
270.18 85.78 0.1100
296.33 86.36 0.1100
324.34 86.68 0.1100
368.56 87.05 0.1100

----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0128) 167.30 7.27 3.00 25.83 2.52 0.08
OUTFLOW : ID= 1 (0604) 167.30 2.60 3.25 25.82 1.99 0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min
Area (ha)= 24.00
Total Imp(%)= 78.00 Dir. Conn.(%)= 69.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 18.72 5.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 400.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 98.27
over (min) 5.00 15.00
Storage Coeff. (min)= 5.75 (ii) 14.50 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

PEAK FLOW (cms)= 4.54 0.80 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 61.60 34.91 53.33
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.52 0.79

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0130)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0604): 167.30 2.603 3.25 25.82
+ ID2= 2 (6042): 24.00 5.210 3.00 53.33
=====

ID = 3 (0130): 191.30 7.489 3.00 29.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0605)|
| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (801.4) ----->			
Distance	Elevation	Manning	
0.00	82.95	0.1100	
3.78	82.95	0.1100	
9.24	82.49	0.1100	
50.67	82.10	0.1100	
105.12	82.17	0.1100	
119.34	81.56	0.1100	
150.67	81.66	0.1100	
157.23	82.37	0.1100	
190.03	82.57	0.1100	
223.75	82.27	0.1100	
252.32	82.50	0.1100	
254.65	81.95	0.1100 / 0.0700	Main Channel
258.15	80.95	0.0700	Main Channel
259.65	81.95	0.0700 / 0.1100	Main Channel
263.15	82.90	0.1100	
278.14	82.80	0.1100	
282.35	81.68	0.1100	
285.02	82.19	0.1100	
336.56	82.53	0.1100	
404.40	82.68	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15

0.92 81.87 .827E+04 3.4 0.30 40.03
1.00 81.95 .112E+05 5.2 0.33 35.88
1.10 82.05 .151E+05 8.0 0.38 31.68
1.21 82.16 .207E+05 8.8 0.30 39.37
1.31 82.26 .306E+05 14.0 0.33 36.36
1.41 82.36 .433E+05 20.3 0.34 35.59
1.52 82.47 .606E+05 28.4 0.34 35.57
1.62 82.57 .828E+05 41.0 0.36 33.68
1.73 82.68 .109E+06 60.1 0.39 30.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0130) 191.30 7.49 3.00 29.27 1.09 0.37
OUTFLOW: ID= 1 (0605) 191.30 3.44 3.42 29.27 0.92 0.30

| CALIB
| STANDHYD (6112)| Area (ha)= 11.40
| ID= 1 DT= 5.0 min | Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.21 3.19
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70

| ADD HYD (0139)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0605): 191.30 3.437 3.42 29.27
+ ID2= 2 (6112): 11.40 2.333 3.00 49.85
=====

ID = 3 (0139): 202.70 4.890 3.00 30.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (6052)| Area (ha)= 15.90
| ID= 1 DT= 5.0 min | Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 54.20
over (min) 5.00 20.00
Storage Coeff. (min)= 5.08 (ii) 16.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

PEAK FLOW (cms)= 2.88 0.36 3.124 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 23.93 48.42
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.35 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)
1 + 2 = 3

AREA QPEAK TPEAK R.V.

2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0132) 218.60 8.01 3.00 31.73 0.75 0.73
OUTFLOW: ID= 1 (0530) 218.60 6.29 3.08 31.73 0.67 0.69

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 3.83 1.97
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70

(ha) (cms) (hrs) (mm)
ID1= 1 (0139): 202.70 4.890 3.00 30.43
+ ID2= 2 (6052): 15.90 3.124 3.00 48.42
ID = 3 (0132): 218.60 8.014 3.00 31.73

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2--> OUT= 1 Routing time step (min)'= 5.00

DATA FOR SECTION (350.0) -----
Distance Elevation Manning
0.00 81.70 0.1100
3.84 81.72 0.1100
5.87 80.72 0.1100
9.38 81.42 0.1100
49.64 81.07 0.1100
80.61 80.72 0.1100
85.61 81.14 0.1100
93.32 80.00 0.1100
95.04 80.45 0.1100
102.72 80.66 0.1100
110.13 78.93 0.1100 /0.0700 Main Channel
118.05 78.63 0.0700 Main Channel
124.40 78.89 0.0700 /0.1100 Main Channel
132.18 79.61 0.1100
139.34 79.23 0.1100
144.67 79.43 0.1100
149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70

1.333 4.06 2.833 73.01 4.333 5.41 5.83 2.70
1.417 4.06 2.917 105.46 4.417 5.41 5.92 2.70
1.500 4.06 3.000 105.46 4.500 5.41 6.00 2.70

Max.Eff.Inten.(mm/hr)= 105.46 50.53
over (min) 5.00 20.00
Storage Coeff. (min)= 3.75 (ii) 15.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.25 0.07

PEAK FLOW (cms)= 0.93 0.17 1.043 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 23.21 44.71
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.34 0.66

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0530): 218.60 6.287 3.08 31.73
+ ID2= 2 (5302): 5.80 1.043 3.00 44.71
ID = 3 (0134): 224.40 6.805 3.00 32.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0120): 273.80 14.065 3.00 34.25
+ ID2= 2 (0134): 224.40 6.805 3.00 32.07
ID = 3 (0135): 498.20 20.870 3.00 33.27

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0507)|
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (40.0) ----->

Distance	Elevation	Manning
0.00	79.36	0.0900
7.45	79.32	0.0900
13.77	79.27	0.0900
20.24	79.24	0.0900
27.28	79.26	0.0900
34.16	79.13	0.0900
40.79	79.05	0.0900
47.58	79.05	0.0900
54.30	79.07	0.0900
60.87	79.24	0.0900
71.39	79.48	0.0900
73.53	78.96	0.0900
76.96	78.07	0.0900
82.21	77.08	0.0900 /0.0700
85.82	76.28	0.0700
89.97	76.89	0.0700
91.35	77.38	0.0700 /0.0900
95.27	78.68	0.0900
98.44	79.63	0.0900
102.89	79.89	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ----> <-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0135)	498.20	20.87	3.00	33.27	2.17	0.92
OUTFLOW: ID= 1 (0507)	498.20	17.46	3.33	33.27	2.02	0.88

| CALIB
| STANDHYD (5072)| Area (ha)= 48.90
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 36.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	24.45	24.45
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	570.96	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06
0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 73.92
over (min) 5.00 20.00
Storage Coeff. (min)= 7.11 (ii) 16.92 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.17 0.06

TOTALS
PEAK FLOW (cms)= 4.65 2.44 6.334 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 28.72 40.55
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.42 0.60

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0122)|
| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0507):	498.20	17.456	3.33	33.27
+ ID2= 2 (5072):	48.90	6.334	3.00	40.55
=====				
ID = 3 (0122):	547.10	20.992	3.25	33.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (5402)| Area (ha)= 9.40
| ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	4.70	4.70
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	250.33	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.70	1.583	6.76	3.083	14.87	4.58	4.06
0.167	2.70	1.667	6.76	3.167	14.87	4.67	4.06
0.250	2.70	1.750	6.76	3.250	14.87	4.75	4.06
0.333	2.70	1.833	6.76	3.333	14.87	4.83	4.06
0.417	2.70	1.917	6.76	3.417	14.87	4.92	4.06

0.500	2.70	2.000	6.76	3.500	14.87	5.00	4.06
0.583	4.06	2.083	8.11	3.583	6.76	5.08	2.70
0.667	4.06	2.167	8.11	3.667	6.76	5.17	2.70
0.750	4.06	2.250	8.11	3.750	6.76	5.25	2.70
0.833	4.06	2.333	8.11	3.833	6.76	5.33	2.70
0.917	4.06	2.417	8.11	3.917	6.76	5.42	2.70
1.000	4.06	2.500	8.11	4.000	6.76	5.50	2.70
1.083	4.06	2.583	40.56	4.083	5.41	5.58	2.70
1.167	4.06	2.667	40.56	4.167	5.41	5.67	2.70
1.250	4.06	2.750	73.01	4.250	5.41	5.75	2.70
1.333	4.06	2.833	73.01	4.333	5.41	5.83	2.70
1.417	4.06	2.917	105.46	4.417	5.41	5.92	2.70
1.500	4.06	3.000	105.46	4.500	5.41	6.00	2.70

Max.Eff.Inten.(mm/hr)= 105.46 50.94
over (min) 5.00 20.00
Storage Coeff. (min)= 4.34 (ii) 15.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.07

TOTALS
PEAK FLOW (cms)= 0.93 0.39 1.198 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 61.60 23.29 36.70
TOTAL RAINFALL (mm)= 67.60 67.60 67.60
RUNOFF COEFFICIENT = 0.91 0.34 0.54

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| STORE HYD(1505)| AREA (ha)= 30.00
| ID= 1 DT= 5.0min | QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 402.14

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25

17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12
18.42	0.39	49.75	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11

21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11

25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10

1.83	0.00	33.00	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29

6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27
8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25

10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18

14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15

18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13

22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12

26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.1		

READ STORM
Filename: C:\Users\jannaormond\AppData\Local\Temp\5b66f7bc-e58d-45d3-b0f6-6b3e1edcbf8b\00d06e36
Ptotal= 81.60 mm
Comments: Mount Hope-6 hour SCS Distribution Desig

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	3.26	1.50	8.16	3.00	17.95	4.50	4.90
0.17	3.26	1.67	8.16	3.17	17.95	4.67	4.90
0.33	3.26	1.83	8.16	3.33	17.95	4.83	4.90
0.50	4.90	2.00	9.79	3.50	8.16	5.00	3.26
0.67	4.90	2.17	9.79	3.67	8.16	5.17	3.26
0.83	4.90	2.33	9.79	3.83	8.16	5.33	3.26
1.00	4.90	2.50	48.96	4.00	6.53	5.50	3.26
1.17	4.90	2.67	88.13	4.17	6.53	5.67	3.26
1.33	4.90	2.83	127.30	4.33	6.53	5.83	3.26

CALIB
NASHYD (5011)
ID= 1 DT= 5.0 min
Area (ha)= 80.20
Ia (mm)= 8.00
U.H. Tp(hrs)= 0.85
Curve Number (CN)= 65.0
of Linear Res.(N)= 3.00

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26

1.500 4.90 | 3.000 127.30 | 4.500 6.53 | 6.00 3.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 2.505 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 25.750
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.316

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5012)
ID= 1 DT= 5.0 min
Area (ha)= 39.40
Total Imp(%)= 38.00
Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.97 24.43
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 73.75
over (min) 5.00 20.00
Storage Coeff. (min)= 6.18 (ii) 16.00 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.19 0.07
TOTALS
PEAK FLOW (cms)= 3.09 2.48 4.800 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 30.20 41.09
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.37 0.50

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (5011): 80.20 2.505 3.83 25.75
+ ID2= 2 (5012): 39.40 4.800 3.00 41.09
ID = 3 (0100): 119.60 5.365 3.00 30.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	

101.34 88.18 0.1100
113.53 88.23 0.1100
128.57 88.32 0.1100
142.19 88.61 0.1100
155.81 88.53 0.1100
183.05 88.85 0.1100
187.19 88.84 0.1100
211.21 88.88 0.1100

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.494E+04	4.5	0.93	21.56
1.21	88.05	.150E+05	7.1	0.96	20.43
1.33	88.17	.233E+05	10.6	0.98	19.49
1.44	88.28	.346E+05	15.5	0.99	18.78
1.56	88.40	.484E+05	22.8	0.99	18.15
1.67	88.51	.634E+05	32.1	0.99	17.60
1.79	88.63	.807E+05	41.2	0.99	17.12
1.90	88.74	.101E+06	54.6	0.99	16.70
2.02	88.86	.124E+06	64.7	0.99	16.32

AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 119.60 5.36 3.00 30.80 1.14 0.60
OUTFLOW: ID= 1 (0502) 119.60 3.82 3.83 30.80 1.05 0.73

CALIB
STANDHYD (5022)
ID= 1 DT= 5.0 min
Area (ha)= 51.10
Total Imp(%)= 48.00
Dir. Conn.(%)= 34.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 24.53 26.57
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00

Length (m)= 583.67 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 72.26
over (min) 5.00 20.00
Storage Coeff. (min)= 6.69 (ii) 16.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06

PEAK FLOW (cms)= 5.60 2.60 7.381 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 80.10 28.64 46.14
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.98 0.35 0.57

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0102)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0502): 119.60 3.820 3.83 30.80
+ ID2= 2 (5022): 51.10 7.381 3.00 46.14
=====

ID = 3 (0102): 170.70 9.372 3.00 35.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0503)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 /0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 /0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	
351.95	87.78	0.0900	
388.59	87.46	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60

2.03 86.24 .462E+04 17.6 1.42 4.37
2.24 86.45 .560E+04 22.1 1.47 4.22
2.45 86.66 .695E+04 27.6 1.48 4.20
2.66 86.87 .925E+04 31.2 1.25 4.94
2.86 87.07 .168E+05 43.1 0.96 6.48
3.07 87.28 .297E+05 67.7 0.85 7.30
3.28 87.49 .456E+05 103.1 0.84 7.38
3.48 87.69 .663E+05 159.6 0.89 6.93
3.69 87.90 .907E+05 223.4 0.92 6.77

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0102) 170.70 9.37 3.00 35.39 1.56 1.24
OUTFLOW: ID= 1 (0503) 170.70 8.46 3.08 35.39 1.49 1.21

| CALIB
| STANDHYD (5032)| Area (ha)= 13.80
| ID= 1 DT= 5.0 min| Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.49 3.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26

| ADD HYD (0104)|
| 1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0503): 170.70 8.464 3.08 35.39
+ ID2= 2 (5032): 13.80 3.609 3.00 63.18
=====

ID = 3 (0104): 184.50 11.601 3.00 37.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0504)|
| IN= 2--> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) ----->		
Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900

169.31	82.61	0.0900	
217.10	82.90	0.0900	
229.61	83.66	0.0900 / 0.0700	Main Channel
232.80	81.85	0.0700	Main Channel
243.24	83.87	0.0700	Main Channel
257.77	84.06	0.0900	
312.01	83.52	0.0900	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900	
513.93	82.96	0.0900	
526.85	83.23	0.0900	
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<----- hydrograph ----->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0104)	184.50	11.60	3.00	37.47	0.86
OUTFLOW: ID= 1 (0504)	184.50	8.72	3.17	37.47	0.82

CALIB

| STANDHYD (5042) | Area (ha)= 7.70
| ID= 1 DT= 5.0 min | Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

Surface Area (ha)= 5.77 Pervious (i)= 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 99.16
over (min)= 5.00 15.00
Storage Coeff. (min)= 3.79 (ii) 12.51 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08
TOTALS
PEAK FLOW (cms)= 1.73 0.31 1.988 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 35.71 61.64
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.44 0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0106) |
| 1 + 2 = 3 |

	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0504):	184.50	8.722	3.17	37.47
+ ID2= 2 (5042):	7.70	1.988	3.00	61.64
=====				
ID = 3 (0106):	192.20	9.380	3.17	38.44

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| STANDHYD (5212) |
| ID= 1 DT= 5.0 min |

Area (ha)= 15.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.78 3.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26

1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 117.36
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.69 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
TOTALS
PEAK FLOW (cms)= 3.51 0.76 4.156 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 43.60 64.72
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.53 0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (5202) |
| ID= 1 DT= 5.0 min |

Area (ha)= 29.70
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.85 14.85
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.97 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90

0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 97.24
over (min) 5.00 15.00
Storage Coeff. (min)= 5.68 (ii) 14.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 3.44 2.22 5.286 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 80.10 37.59 52.47
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.98 0.46 0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0521)		
IN= 2----> OUT= 1		Routing time step (min)'= 5.00
<----- DATA FOR SECTION (815.4) ----->		
Distance	Elevation	Manning
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900 /0.0700 Main Channel
513.93	82.96	0.0700 Main Channel
526.85	83.23	0.0700 /0.0900 Main Channel
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900
<----- TRAVEL TIME TABLE ----->		
DEPTH	ELEV	VOLUME
	FLOW RATE	VELOCITY
		TRAV.TIME

ID = 3 (0114): 237.60 15.235 3.00 41.93

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)					
IN= 2----> OUT= 1					
Routing time step (min)'= 5.00					
<----- DATA FOR SECTION (553.6) ----->					
Distance	Elevation	Manning			
0.00	81.24	0.1100			
33.01	80.98	0.1100			
49.97	81.27	0.1100			
54.18	80.35	0.1100			
60.88	81.23	0.1100			
69.13	79.02	0.1100			
92.42	79.04	0.1100			
98.70	80.89	0.1100			
128.88	81.13	0.1100			
199.00	81.23	0.1100			
266.11	81.68	0.1100			
306.94	81.73	0.1100			
331.74	81.55	0.1100 / 0.0700			
336.74	80.15	0.0700			
346.34	81.64	0.0700 / 0.0900			
394.77	81.68	0.0900			
431.64	81.44	0.0900			
477.44	82.08	0.0900			
481.25	82.81	0.0900			
501.51	83.16	0.0900			
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45

(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	83.00	.378E+02	0.0	0.11	83.81
0.09	83.05	.151E+03	0.0	0.17	52.79
0.14	83.09	.340E+03	0.1	0.22	40.29
0.18	83.14	.605E+03	0.3	0.27	33.26
0.23	83.18	.946E+03	0.5	0.32	28.66
0.27	83.23	.151E+04	0.9	0.33	27.77
0.32	83.27	.323E+04	1.8	0.31	29.51
0.37	83.32	.510E+04	3.2	0.34	26.44
0.42	83.37	.713E+04	5.0	0.38	23.61
0.46	83.42	.934E+04	7.3	0.42	21.44
0.51	83.47	.121E+05	10.0	0.45	20.23
0.56	83.52	.156E+05	13.4	0.47	19.44
0.61	83.57	.196E+05	17.7	0.49	18.52
0.66	83.61	.240E+05	22.8	0.52	17.49
0.71	83.66	.286E+05	28.4	0.54	16.75
0.75	83.71	.336E+05	34.7	0.56	16.14
0.80	83.76	.390E+05	41.8	0.58	15.55
0.85	83.81	.448E+05	49.8	0.60	14.99
0.90	83.86	.510E+05	58.8	0.63	14.46

<---- hydrograph ---->					
<-pipe / channel-->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5202)	29.70	5.29	3.00	52.47	0.42 0.39
OUTFLOW: ID= 1 (0521)	29.70	2.74	3.17	52.45	0.35 0.33

ADD HYD (0113)					
1 + 2 = 3					
AREA	QPEAK	TPEAK	R.V.		
(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (0521):	29.70	2.737	3.17	52.45	
+ ID2= 2 (5212):	15.70	4.156	3.00	64.72	
=====					
ID = 3 (0113):	45.40	6.350	3.00	56.69	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)					
1 + 2 = 3					
AREA	QPEAK	TPEAK	R.V.		
(ha)	(cms)	(hrs)	(mm)		
ID1= 1 (0106):	192.20	9.380	3.17	38.44	
+ ID2= 2 (0113):	45.40	6.350	3.00	56.69	
=====					

1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ---->					
<-pipe / channel-->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.60	15.23	3.00	41.93	0.94 0.62
OUTFLOW: ID= 1 (0505)	237.60	14.47	3.08	41.93	0.91 0.61

CALIB				
STANDHYD (5052)				
ID= 1 DT= 5.0 min				
		Area (ha)=	15.90	
		Total Imp(%)=	74.00	Dir. Conn.(%)= 65.00
		IMPERVIOUS	PERVIOUS (i)	
Surface Area	(ha)=	11.77	4.13	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	325.58	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)= 127.30 93.10
over (min) 5.00 15.00
Storage Coeff. (min)= 4.71 (ii) 13.65 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 3.50 0.60
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 34.81
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.43

TOTALS
4.002 (iii)
3.00
61.32
81.60
0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0505): 237.60 14.467 3.08 41.93
+ ID2= 2 (5052): 15.90 4.002 3.00 61.32
ID = 3 (0108): 253.50 17.093 3.00 43.14

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->
Distance Elevation Manning
0.00 81.42 0.0900
7.45 81.36 0.0900
32.34 80.38 0.0900
45.97 80.05 0.0900
65.23 79.93 0.0900
84.49 80.35 0.0900
113.49 80.02 0.0900
136.48 80.07 0.0900
188.81 79.81 0.0900
197.86 79.25 0.0900 /0.0700 Main Channel
200.70 78.22 0.0700 Main Channel

203.29 79.35 0.0700 /0.0900 Main Channel
204.01 79.67 0.0900
236.47 80.40 0.0900
277.80 80.48 0.0900
305.35 80.37 0.0900
346.67 80.41 0.0900
387.99 80.33 0.0900
415.54 80.53 0.0900
447.88 80.49 0.0900

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.11 78.34 .979E+01 0.0 0.23 21.53
0.23 78.45 .392E+02 0.0 0.37 13.56
0.34 78.56 .881E+02 0.1 0.48 10.35
0.46 78.68 .157E+03 0.3 0.58 8.54
0.57 78.79 .245E+03 0.6 0.67 7.36
0.68 78.91 .352E+03 0.9 0.76 6.52
0.80 79.02 .480E+03 1.4 0.84 5.88
0.91 79.13 .627E+03 1.9 0.92 5.38
1.03 79.25 .793E+03 2.7 0.99 4.98
1.15 79.37 .103E+04 3.8 1.09 4.55
1.28 79.50 .135E+04 5.2 1.16 4.28
1.40 79.62 .175E+04 7.1 1.20 4.12
1.52 79.75 .228E+04 9.3 1.21 4.08
1.65 79.87 .318E+04 11.7 1.10 4.52
1.77 80.00 .524E+04 15.8 0.90 5.52
1.90 80.12 .973E+04 24.3 0.74 6.69
2.02 80.24 .158E+05 39.7 0.75 6.62
2.15 80.37 .230E+05 59.2 0.77 6.46
2.27 80.49 .349E+05 90.3 0.77 6.44

hydrograph
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.50 17.09 3.00 43.14 1.79 0.87
OUTFLOW: ID= 1 (0506) 253.50 15.26 3.17 43.14 1.76 0.92

CALIB
STANDHYD (5062)
ID= 1 DT= 5.0 min
Area (ha)= 11.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.78 2.92
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 279.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 106.57
over (min) 5.00 15.00
Storage Coeff. (min)= 4.30 (ii) 12.77 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 2.60 0.51
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 38.39
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.47

TOTALS
3.026 (iii)
3.00
62.58
81.60
0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0506): 253.50 15.257 3.17 43.14
+ ID2= 2 (5062): 11.70 3.026 3.00 62.58
ID = 3 (0110): 265.20 16.346 3.17 44.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min
Area (ha)= 1.70
Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TRANSFORMED HYETOGRAPH
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 87.16

over (min) 5.00 15.00
Storage Coeff. (min)= 2.41 (ii) 11.59 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.30 0.09

TOTALS
PEAK FLOW (cms)= 0.31 0.09 0.385 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 32.90 55.10
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.40 0.68

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100 /0.0700 Main Channel
69.13 79.02 0.0700 Main Channel
92.42 79.04 0.0700 Main Channel
98.70 80.89 0.0700 /0.1100 Main Channel
128.88 81.13 0.1100
199.00 81.23 0.1100

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .361E+03 0.6 0.24 9.91
0.23 79.25 .776E+03 2.1 0.40 6.09
0.35 79.37 .121E+04 4.3 0.52 4.65
0.47 79.48 .165E+04 7.1 0.63 3.85
0.59 79.60 .211E+04 10.5 0.72 3.34
0.70 79.72 .258E+04 14.4 0.81 2.98
0.82 79.84 .307E+04 18.8 0.89 2.71
0.94 79.95 .357E+04 23.8 0.97 2.50
1.05 80.07 .408E+04 29.2 1.04 2.33
1.17 80.19 .461E+04 35.1 1.10 2.19

1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 101.25
over (min) 5.00 15.00
Storage Coeff. (min)= 2.86 (ii) 11.50 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

TOTALS
PEAK FLOW (cms)= 0.61 0.16 0.744 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 37.63 59.65
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.46 0.73

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)
1 + 2 = 3 | AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0511): 1.70 0.279 3.00 55.08
+ ID2= 2 (5112): 3.00 0.744 3.00 59.65
=====

ID = 3 (0117): 4.70 1.023 3.00 58.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->
Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 /0.0700 Main Channel

1.29 80.30 .515E+04 41.5 1.17 2.07
1.41 80.42 .571E+04 48.4 1.23 1.97
1.52 80.54 .631E+04 55.8 1.28 1.88
1.64 80.66 .695E+04 63.8 1.33 1.81
1.76 80.77 .762E+04 72.3 1.38 1.76
1.87 80.89 .833E+04 81.4 1.42 1.71
2.00 81.02 .931E+04 92.4 1.44 1.68
2.13 81.14 .109E+05 104.8 1.39 1.74
2.25 81.27 .140E+05 120.9 1.25 1.93

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5102) 1.70 0.39 3.00 55.10 0.07 0.24
OUTFLOW: ID= 1 (0511) 1.70 0.28 3.00 55.08 0.05 0.24

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min | Area (ha)= 3.00
Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26

46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 /0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

<----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71
0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71
0.79 80.51 .934E+03 0.9 0.46 16.84
0.93 80.64 .245E+04 1.6 0.31 24.96
1.06 80.77 .873E+04 4.6 0.25 31.51
1.19 80.90 .179E+05 11.4 0.30 26.08
1.32 81.04 .278E+05 22.6 0.38 20.45
1.46 81.17 .381E+05 37.5 0.46 16.91
1.60 81.31 .484E+05 55.4 0.54 14.57
1.74 81.45 .588E+05 76.0 0.61 12.90
1.87 81.59 .693E+05 99.3 0.67 11.63
2.01 81.72 .798E+05 125.0 0.73 10.64
2.15 81.86 .903E+05 153.1 0.80 9.83
2.29 82.00 .101E+06 183.5 0.85 9.16
2.42 82.14 .112E+06 214.3 0.90 8.68
2.56 82.27 .123E+06 244.4 0.93 8.40

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0117) 4.70 1.02 3.00 58.00 0.81 0.43
OUTFLOW: ID= 1 (0512) 4.70 0.63 3.08 57.94 0.69 0.43

CALIB
STANDHYD (5122)
ID= 1 DT= 5.0 min | Area (ha)= 3.90
Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.65 1.25
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 161.25 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)= 127.30
over (min) 5.00
Storage Coeff. (min)= 3.09 (ii)
Unit Hyd. Tpeak (min)= 5.00
Unit Hyd. peak (cms)= 0.27

TOTALS
0.952 (iii)
3.00
59.19
81.60
0.73

PEAK FLOW (cms)= 0.78
TIME TO PEAK (hrs)= 3.00
RUNOFF VOLUME (mm)= 75.60
TOTAL RAINFALL (mm)= 81.60
RUNOFF COEFFICIENT = 0.93

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3				

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.276 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 23.626
TOTAL RAINFALL (mm)= 81.600
RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	Area	(ha)= 11.00
STANDHYD (6012)	Total Imp(%)= 28.00	Dir. Conn.(%)= 16.00
ID= 1 DT= 5.0 min		

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.08 7.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

Max.Eff.Inten.(mm/hr)= 127.30 52.38

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.634	3.08	57.94
+ ID2= 2 (5122):	3.90	0.952	3.00	59.19
=====				
ID = 3 (0119):	8.60	1.541	3.00	58.50

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.20	16.346	3.17	44.00
+ ID2= 2 (0119):	8.60	1.541	3.00	58.50
=====				
ID = 3 (0120):	273.80	17.317	3.00	44.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)= 44.10	Curve Number (CN)= 62.0
NASHYD (6011)	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.83	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90		
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90		
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26		
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26		
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26		
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26		
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26		
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26		
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26		
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26		
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26		
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26		
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26		
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26		

over (min) 5.00 20.00
Storage Coeff. (min)= 4.22 (ii) 15.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.07

TOTALS
PEAK FLOW (cms)= 0.60 0.69 1.070 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 75.60 26.83 34.64
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.33 0.42

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (6011):	44.10	1.276	3.83	23.63
+ ID2= 2 (6012):	11.00	1.070	3.00	34.64
=====				
ID = 3 (0124):	55.10	1.597	3.50	25.82

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area	(ha)= 43.60	Curve Number (CN)= 62.0
NASHYD (6021)	Ia	(mm)= 8.00	# of Linear Res.(N)= 3.00
ID= 1 DT= 5.0 min	U.H. Tp(hrs)=	0.95	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90		
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90		
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90		
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90		

0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.141 (i)
 TIME TO PEAK (hrs)= 4.000
 RUNOFF VOLUME (mm)= 23.626
 TOTAL RAINFALL (mm)= 81.600
 RUNOFF COEFFICIENT = 0.290

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
 STANDHYD (6022) Area (ha)= 12.90
 ID= 1 DT= 5.0 min Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
 Surface Area (ha)= 4.51 8.38
 Dep. Storage (mm)= 6.00 8.00
 Average Slope (%)= 1.00 1.00
 Length (m)= 293.26 40.00
 Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90

0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 53.84
 over (min)= 5.00 20.00
 Storage Coeff. (min)= 4.42 (ii) 15.55 (ii)
 Unit Hyd. Tpeak (min)= 5.00 20.00
 Unit Hyd. peak (cms)= 0.23 0.07

TOTALS
 PEAK FLOW (cms)= 1.01 0.74 1.520 (iii)
 TIME TO PEAK (hrs)= 3.00 3.17 3.00
 RUNOFF VOLUME (mm)= 75.60 27.16 38.30
 TOTAL RAINFALL (mm)= 81.60 81.60 81.60
 RUNOFF COEFFICIENT = 0.93 0.33 0.47

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
 CN* = 62.0 Ia = Dep. Storage (Above)
 (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
 THAN THE STORAGE COEFFICIENT.
 (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
 1 + 2 = 3
 AREA QPEAK TPEAK R.V.
 (ha) (cms) (hrs) (mm)
 ID1= 1 (6021): 43.60 1.141 4.00 23.63
 + ID2= 2 (6022): 12.90 1.520 3.00 38.30
 ID = 3 (0125): 56.50 1.733 3.00 26.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
 1 + 2 = 3
 AREA QPEAK TPEAK R.V.

(ha) (cms) (hrs) (mm)
 ID1= 1 (0124): 55.10 1.597 3.50 25.82
 + ID2= 2 (0125): 56.50 1.733 3.00 26.98
 ID = 3 (0126): 111.60 3.093 3.00 26.41

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
 IN= 2----> OUT= 1 Routing time step (min)'= 5.00

<----- DATA FOR SECTION (2135.9) ----->
 Distance Elevation Manning
 0.00 92.58 0.1400
 8.54 92.59 0.1400
 22.11 92.47 0.1400
 48.74 91.83 0.1400
 67.59 91.58 0.1400
 86.45 91.21 0.1400
 103.50 90.80 0.1400
 118.09 90.23 0.1400
 127.84 90.09 0.1400 /0.0700 Main Channel
 129.84 89.59 0.0700 Main Channel
 130.34 90.09 0.0700 /0.1400 Main Channel
 140.57 90.14 0.1400
 161.87 90.11 0.1400
 177.03 90.04 0.1400
 188.67 89.87 0.1400
 199.59 90.31 0.1400
 212.02 90.96 0.1400
 225.58 91.35 0.1400
 252.71 91.66 0.1400
 274.11 91.86 0.1400

----- TRAVEL TIME TABLE ----->
 DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
 (m) (m) (cu.m.) (cms) (m/s) (min)
 0.12 89.71 .358E+02 0.0 0.19 81.29
 0.25 89.84 .143E+03 0.0 0.30 51.21
 0.37 89.96 .689E+03 0.2 0.23 67.44
 0.50 90.09 .278E+04 0.6 0.20 77.83
 0.67 90.26 .132E+05 3.4 0.23 65.31
 0.83 90.42 .262E+05 9.3 0.33 46.76
 1.00 90.59 .403E+05 17.9 0.41 37.64
 1.17 90.76 .556E+05 28.8 0.48 32.17
 1.33 90.92 .721E+05 42.0 0.53 28.63
 1.50 91.09 .903E+05 57.1 0.58 26.37
 1.67 91.26 .110E+06 74.7 0.62 24.65
 1.83 91.42 .133E+06 93.4 0.64 23.71

2.00 91.59 .159E+06 113.6 0.66 23.26
 2.17 91.76 .188E+06 136.6 0.67 22.96
 2.33 91.92 .222E+06 168.5 0.70 21.97
 2.50 92.09 .258E+06 211.3 0.75 20.33
 2.67 92.26 .294E+06 258.5 0.81 18.98
 2.83 92.42 .332E+06 310.1 0.86 17.85
 3.00 92.59 .371E+06 358.0 0.88 17.29

<---- hydrograph ----> <-pipe / channel->
 AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
 (ha) (cms) (hrs) (mm) (m) (m/s)
 INFLOW : ID= 2 (0126) 111.60 3.09 3.00 26.41 0.65 0.23
 OUTFLOW: ID= 1 (0603) 111.60 2.16 4.58 26.40 0.59 0.22

CALIB
 STANDHYD (6032) Area (ha)= 34.60
 ID= 1 DT= 5.0 min Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
 Surface Area (ha)= 16.26 18.34
 Dep. Storage (mm)= 1.50 8.00
 Average Slope (%)= 1.00 1.00
 Length (m)= 480.28 40.00
 Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26

1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 95.24
over (min) 5.00 15.00
Storage Coeff. (min)= 5.95 (ii) 14.81 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08

TOTALS
PEAK FLOW (cms)= 3.64 2.65 5.841 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 80.10 37.28 50.98
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.98 0.46 0.62

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (6102)	Area (ha)= 21.10
ID= 1 DT= 5.0 min	Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.55	10.55
Dep. Storage (mm)=	1.50	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	375.06	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26

0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 92.51
over (min) 5.00 15.00
Storage Coeff. (min)= 5.13 (ii) 14.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.08

TOTALS
PEAK FLOW (cms)= 2.48 1.51 3.731 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 80.10 35.76 51.28
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.98 0.44 0.63

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0603):	111.60	2.157	4.58	26.40	
+ ID2= 2 (6032):	34.60	5.841	3.00	50.98	
ID = 3 (0128):	146.20	6.396	3.00	32.22	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)		AREA	QPEAK	TPEAK	R.V.
3 + 2 = 1		(ha)	(cms)	(hrs)	(mm)
ID1= 3 (0128):	146.20	6.396	3.00	32.22	
+ ID2= 2 (6102):	21.10	3.731	3.00	51.28	

ID = 1 (0128): 167.30 10.127 3.00 34.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)	
IN= 2---> OUT= 1	Routing time step (min)= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700 Main Channel
166.55	83.78	0.0700 Main Channel
168.05	84.78	0.0700 / 0.1100 Main Channel
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82

3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0128)	167.30	10.13	3.00	34.62	2.68	0.08
OUTFLOW: ID= 1 (0604)	167.30	3.47	3.08	34.61	2.27	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB	
STANDHYD (6042)	Area (ha)= 24.00
ID= 1 DT= 5.0 min	Total Imp(%)= 78.00 Dir. Conn.(%)= 69.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.72	5.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	400.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26

1.500 4.90 | 3.000 127.30 | 4.500 6.53 | 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 129.18
over (min) 5.00 15.00
Storage Coeff. (min)= 5.33 (ii) 10.32 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.21 0.09

PEAK FLOW (cms)= 5.53 1.23
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 46.55
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.57 0.82

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0604):	167.30	3.470	3.08	34.61
+ ID2= 2 (6042):	24.00	6.596	3.00	66.59
=====				
ID = 3 (0130):	191.30	9.752	3.00	38.63

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 275.68 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 111.68
over (min) 5.00 15.00
Storage Coeff. (min)= 4.26 (ii) 12.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.08

PEAK FLOW (cms)= 2.42 0.59
TIME TO PEAK (hrs)= 3.00 3.08
RUNOFF VOLUME (mm)= 75.60 41.50
TOTAL RAINFALL (mm)= 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.51 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

252.32 82.50 0.1100
254.65 81.95 0.1100 /0.0700 Main Channel
258.15 80.95 0.0700 Main Channel
259.65 81.95 0.0700 /0.1100 Main Channel
263.15 82.90 0.1100
278.14 82.80 0.1100
282.35 81.68 0.1100
285.02 82.19 0.1100
336.56 82.53 0.1100
404.40 82.68 0.1100

----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0130)	191.30	9.75	3.00	38.63	1.23	0.31
OUTFLOW: ID= 1 (0605)	191.30	4.65	3.25	38.62	0.97	0.32

CALIB
STANDHYD (6112)
ID= 1 DT= 5.0 min | Area (ha)= 11.40
Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.21 3.19

ADD HYD (0139)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0605):	191.30	4.650	3.25	38.62
+ ID2= 2 (6112):	11.40	2.916	3.00	62.64
=====				
ID = 3 (0139):	202.70	6.249	3.00	39.97

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min | Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)= 127.30 88.54
over (min) 5.00 15.00
Storage Coeff. (min)= 4.71 (ii) 13.83 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08
TOTALS
PEAK FLOW (cms)= 3.50 0.57 3.971 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 33.11 60.73
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.41 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0139): 202.70 6.249 3.00 39.97
+ ID2= 2 (6052): 15.90 3.971 3.00 60.73
ID = 3 (0132): 218.60 10.220 3.00 41.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) -----
Distance Elevation Manning
0.00 81.70 0.1100
3.84 81.72 0.1100
5.87 80.72 0.1100
9.38 81.42 0.1100
49.64 81.07 0.1100
80.61 80.72 0.1100
85.61 81.14 0.1100
93.32 80.00 0.1100
95.04 80.45 0.1100
102.72 80.66 0.1100
110.13 78.93 0.1100 /0.0700 Main Channel

118.05 78.63 0.0700 Main Channel
124.40 78.89 0.0700 /0.1100 Main Channel
132.18 79.61 0.1100
139.34 79.23 0.1100
144.67 79.43 0.1100
149.63 79.98 0.1100
153.42 79.79 0.1100
158.56 80.58 0.1100
176.89 81.15 0.1100

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70
2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0132) 218.60 10.22 3.00 41.48 0.83 0.75
OUTFLOW: ID= 1 (0530) 218.60 8.09 3.08 41.48 0.75 0.73

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min
Area (ha)= 5.80
Total Imp(%)= 66.00 Dir. Conn.(%)= 56.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.83 1.97
Dep. Storage (mm)= 6.00 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 3.26 1.583 8.16 3.083 17.95 4.58 4.90
0.167 3.26 1.667 8.16 3.167 17.95 4.67 4.90
0.250 3.26 1.750 8.16 3.250 17.95 4.75 4.90
0.333 3.26 1.833 8.16 3.333 17.95 4.83 4.90
0.417 3.26 1.917 8.16 3.417 17.95 4.92 4.90
0.500 3.26 2.000 8.16 3.500 17.95 5.00 4.90
0.583 4.90 2.083 9.79 3.583 8.16 5.08 3.26
0.667 4.90 2.167 9.79 3.667 8.16 5.17 3.26
0.750 4.90 2.250 9.79 3.750 8.16 5.25 3.26
0.833 4.90 2.333 9.79 3.833 8.16 5.33 3.26
0.917 4.90 2.417 9.79 3.917 8.16 5.42 3.26
1.000 4.90 2.500 9.79 4.000 8.16 5.50 3.26
1.083 4.90 2.583 48.96 4.083 6.53 5.58 3.26
1.167 4.90 2.667 48.96 4.167 6.53 5.67 3.26
1.250 4.90 2.750 88.13 4.250 6.53 5.75 3.26
1.333 4.90 2.833 88.13 4.333 6.53 5.83 3.26
1.417 4.90 2.917 127.30 4.417 6.53 5.92 3.26
1.500 4.90 3.000 127.30 4.500 6.53 6.00 3.26

Max.Eff.Inten.(mm/hr)= 127.30 82.95
over (min) 5.00 15.00
Storage Coeff. (min)= 3.48 (ii) 12.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.26 0.08
TOTALS
PEAK FLOW (cms)= 1.13 0.26 1.344 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 75.60 32.22 56.51
TOTAL RAINFALL (mm)= 81.60 81.60 81.60
RUNOFF COEFFICIENT = 0.93 0.39 0.69

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0530): 218.60 8.092 3.08 41.48
+ ID2= 2 (5302): 5.80 1.344 3.00 56.51
ID = 3 (0134): 224.40 8.789 3.00 41.87

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0120): 273.80 17.317 3.00 44.45
+ ID2= 2 (0134): 224.40 8.789 3.00 41.87
ID = 3 (0135): 498.20 26.106 3.00 43.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (40.0) -----
Distance Elevation Manning
0.00 79.36 0.0900
7.45 79.32 0.0900
13.77 79.27 0.0900
20.24 79.24 0.0900
27.28 79.26 0.0900
34.16 79.13 0.0900
40.79 79.05 0.0900
47.58 79.05 0.0900
54.30 79.07 0.0900
60.87 79.24 0.0900
71.39 79.48 0.0900
73.53 78.96 0.0900
76.96 78.07 0.0900
82.21 77.08 0.0900 /0.0700 Main Channel
85.82 76.28 0.0700 Main Channel
89.97 76.89 0.0700 Main Channel
91.35 77.38 0.0700 /0.0900 Main Channel
95.27 78.68 0.0900
98.44 79.63 0.0900
102.89 79.89 0.0900

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86
0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph ---->

<-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.20	26.11	3.00	43.29	2.39
OUTFLOW: ID= 1 (0507)	498.20	22.63	3.33	43.29	2.24
					0.94

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95	4.58	4.90
0.167	3.26	1.667	8.16	3.167	17.95	4.67	4.90
0.250	3.26	1.750	8.16	3.250	17.95	4.75	4.90
0.333	3.26	1.833	8.16	3.333	17.95	4.83	4.90
0.417	3.26	1.917	8.16	3.417	17.95	4.92	4.90
0.500	3.26	2.000	8.16	3.500	17.95	5.00	4.90
0.583	4.90	2.083	9.79	3.583	8.16	5.08	3.26
0.667	4.90	2.167	9.79	3.667	8.16	5.17	3.26
0.750	4.90	2.250	9.79	3.750	8.16	5.25	3.26
0.833	4.90	2.333	9.79	3.833	8.16	5.33	3.26
0.917	4.90	2.417	9.79	3.917	8.16	5.42	3.26
1.000	4.90	2.500	9.79	4.000	8.16	5.50	3.26
1.083	4.90	2.583	48.96	4.083	6.53	5.58	3.26
1.167	4.90	2.667	48.96	4.167	6.53	5.67	3.26
1.250	4.90	2.750	88.13	4.250	6.53	5.75	3.26
1.333	4.90	2.833	88.13	4.333	6.53	5.83	3.26
1.417	4.90	2.917	127.30	4.417	6.53	5.92	3.26
1.500	4.90	3.000	127.30	4.500	6.53	6.00	3.26

Max.Eff.Inten.(mm/hr)=

over (min)

Storage Coeff. (min)=

Unit Hyd. Tpeak (min)=

Unit Hyd. peak (cms)=

127.30

5.00

6.60 (ii)

5.00

0.18

99.72

20.00

15.30 (ii)

20.00

0.07

PEAK FLOW (cms)=

TIME TO PEAK (hrs)=

RUNOFF VOLUME (mm)=

TOTAL RAINFALL (mm)=

RUNOFF COEFFICIENT =

5.69

3.00

75.60

81.60

0.93

3.51

3.17

39.14

81.60

0.48

8.194 (iii)

3.00

52.26

81.60

0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0507):	498.20	22.628	3.33	43.29
+ ID2= 2 (0572):	48.90	8.194	3.00	52.26
=====				
ID = 3 (0122):	547.10	27.218	3.25	44.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

<----- TRANSFORMED HYETOGRAPH ----->					
TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.26	1.583	8.16	3.083	17.95
0.167	3.26	1.667	8.16	3.167	17.95
0.250	3.26	1.750	8.16	3.250	17.95
0.333	3.26	1.833	8.16	3.333	17.95
0.417	3.26	1.917	8.16	3.417	17.95
0.500	3.26	2.000	8.16	3.500	17.95
0.583	4.90	2.083	9.79	3.583	8.16
0.667	4.90	2.167	9.79	3.667	8.16
0.750	4.90	2.250	9.79	3.750	8.16
0.833	4.90	2.333	9.79	3.833	8.16
0.917	4.90	2.417	9.79	3.917	8.16
1.000	4.90	2.500	9.79	4.000	8.16
1.083	4.90	2.583	48.96	4.083	6.53
1.167	4.90	2.667	48.96	4.167	6.53
1.250	4.90	2.750	88.13	4.250	6.53
1.333	4.90	2.833	88.13	4.333	6.53
1.417	4.90	2.917	127.30	4.417	6.53
1.500	4.90	3.000	127.30	4.500	6.53

Max.Eff.Inten.(mm/hr)=

over (min)

Storage Coeff. (min)=

Unit Hyd. Tpeak (min)=

Unit Hyd. peak (cms)=

127.30

5.00

4.02 (ii)

5.00

0.24

83.58

15.00

13.36 (ii)

15.00

0.08

PEAK FLOW (cms)=

TIME TO PEAK (hrs)=

RUNOFF VOLUME (mm)=

TOTAL RAINFALL (mm)=

RUNOFF COEFFICIENT =

1.13

3.00

75.60

81.60

0.93

0.62

3.08

47.47

81.60

0.58

1.641 (iii)

3.00

47.47

81.60

0.58

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505)			AREA		(ha)= 30.00							
ID= 1 DT= 5.0min			QPEAK		(cms)= 0.78							
			TPEAK		(hrs)= 15.58							
			VOLUME		(mm)= 402.14							
TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms	
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16			
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16			
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16			
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16			
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17			
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16			
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16			
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17			
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15			
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16			
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16			
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16			
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16			
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16			
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17			
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16			
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16			
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17			
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17			
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17			
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17			
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17			
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18			
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17			
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18			
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18			
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16			
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18			
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17			
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18			
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17			
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17			

19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11

23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10

27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

4.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28
7.17	0.00	38.42	0.16	69.67	0.70	100.92	0.30	132.17	0.28
7.25	0.00	38.50	0.16	69.75	0.71	101.00	0.30	132.25	0.28
7.33	0.00	38.58	0.16	69.83	0.74	101.08	0.30	132.33	0.28
7.42	0.00	38.67	0.17	69.92	0.76	101.17	0.30	132.42	0.28
7.50	0.00	38.75	0.17	70.00	0.78	101.25	0.30	132.50	0.27
7.58	0.00	38.83	0.17	70.08	0.80	101.33	0.29	132.58	0.27
7.67	0.00	38.92	0.17	70.17	0.82	101.42	0.29	132.67	0.27
7.75	0.00	39.00	0.17	70.25	0.84	101.50	0.29	132.75	0.27
7.83	0.00	39.08	0.17	70.33	0.87	101.58	0.29	132.83	0.27
7.92	0.00	39.17	0.17	70.42	0.91	101.67	0.29	132.92	0.27
8.00	0.00	39.25	0.18	70.50	0.94	101.75	0.28	133.00	0.27

8.08	0.00	39.33	0.18	70.58	0.98	101.83	0.28	133.08	0.27
8.17	0.00	39.42	0.18	70.67	1.01	101.92	0.28	133.17	0.27
8.25	0.00	39.50	0.18	70.75	1.04	102.00	0.28	133.25	0.26
8.33	0.00	39.58	0.19	70.83	1.09	102.08	0.28	133.33	0.26
8.42	0.00	39.67	0.19	70.92	1.14	102.17	0.28	133.42	0.26
8.50	0.00	39.75	0.19	71.00	1.20	102.25	0.28	133.50	0.26
8.58	0.00	39.83	0.19	71.08	1.23	102.33	0.28	133.58	0.26
8.67	0.00	39.92	0.20	71.17	1.25	102.42	0.27	133.67	0.26
8.75	0.00	40.00	0.20	71.25	1.30	102.50	0.27	133.75	0.26
8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.21
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21

12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20
13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17

16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.58	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16
17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14

20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14
21.33	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.16	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12

24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12
25.50	0.26	56.75	0.59	88.00	0.61	119.25	0.15	150.50	0.12
25.58	0.25	56.83	0.59	88.08	0.60	119.33	0.15	150.58	0.12
25.67	0.25	56.92	0.59	88.17	0.59	119.42	0.15	150.67	0.12
25.75	0.25	57.00	0.59	88.25	0.58	119.50	0.15	150.75	0.12
25.83	0.25	57.08	0.59	88.33	0.58	119.58	0.15	150.83	0.12
25.92	0.25	57.17	0.59	88.42	0.57	119.67	0.15	150.92	0.12
26.00	0.24	57.25	0.59	88.50	0.57	119.75	0.15	151.00	0.12
26.08	0.24	57.33	0.59	88.58	0.56	119.83	0.16	151.08	0.12
26.17	0.24	57.42	0.59	88.67	0.55	119.92	0.16	151.17	0.12
26.25	0.24	57.50	0.59	88.75	0.55	120.00	0.16	151.25	0.12
26.33	0.23	57.58	0.58	88.83	0.54	120.08	0.16	151.33	0.12
26.42	0.23	57.67	0.58	88.92	0.53	120.17	0.16	151.42	0.12
26.50	0.23	57.75	0.58	89.00	0.53	120.25	0.16	151.50	0.12
26.58	0.23	57.83	0.57	89.08	0.52	120.33	0.16	151.58	0.12
26.67	0.23	57.92	0.57	89.17	0.51	120.42	0.16	151.67	0.12
26.75	0.22	58.00	0.57	89.25	0.51	120.50	0.16	151.75	0.12
26.83	0.22	58.08	0.57	89.33	0.50	120.58	0.16	151.83	0.12
26.92	0.22	58.17	0.56	89.42	0.50	120.67	0.16	151.92	0.12
27.00	0.22	58.25	0.56	89.50	0.49	120.75	0.16	152.00	0.12
27.08	0.22	58.33	0.56	89.58	0.48	120.83	0.16	152.08	0.12
27.17	0.21	58.42	0.55	89.67	0.48	120.92	0.16	152.17	0.12
27.25	0.21	58.50	0.55	89.75	0.47	121.00	0.16	152.25	0.12
27.33	0.21	58.58	0.54	89.83	0.47	121.08	0.16	152.33	0.11
27.42	0.21	58.67	0.54	89.92	0.47	121.17	0.17	152.42	0.11
27.50	0.21	58.75	0.53	90.00	0.47	121.25	0.17	152.50	0.11
27.58	0.21	58.83	0.53	90.08	0.46	121.33	0.17	152.58	0.11
27.67	0.20	58.92	0.52	90.17	0.46	121.42	0.17	152.67	0.11
27.75	0.20	59.00	0.52	90.25	0.45	121.50	0.17	152.75	0.11
27.83	0.20	59.08	0.52	90.33	0.45	121.58	0.17	152.83	0.11
27.92	0.20	59.17	0.51	90.42	0.44	121.67	0.17	152.92	0.11
28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11

28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.1		

----- U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 0.550 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 6.078
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.152

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	
STANDHYD (5012)	Area (ha)= 39.40
ID= 1 DT= 5.0 min	Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 14.97		24.43
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 512.51		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 13.05
over (min) 10.00 30.00
Storage Coeff. (min)= 8.25 (ii) 27.87 (ii)
Unit Hyd. Tpeak (min)= 10.00 30.00
Unit Hyd. peak (cms)= 0.13 0.04

TOTALS
PEAK FLOW (cms)= 1.32 0.43 1.476 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 7.74 14.05
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.19 0.35

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)
1 + 2 = 3

AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)

ID1= 1 (5011): 80.20 0.550 3.92 6.08
+ ID2= 2 (5012): 39.40 1.476 3.00 14.05
=====

ID = 3 (0100): 119.60 1.576 3.08 8.70

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0502)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1537.5) ----->

Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 / 0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 / 0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

----- TRAVEL TIME TABLE -----					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.849E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49

1.44 88.28 .346E+05 15.5 0.53 37.18
1.56 88.40 .484E+05 22.8 0.56 35.35
1.67 88.51 .634E+05 32.1 0.60 32.90
1.79 88.63 .807E+05 41.2 0.61 32.65
1.90 88.74 .101E+06 54.6 0.64 30.77
2.02 88.86 .124E+06 64.7 0.62 31.85

<--- hydrograph --->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0100)	119.60	1.58	3.08	8.70	0.72
OUTFLOW: ID= 1 (0502)	119.60	1.01	3.67	8.70	0.57

CALIB	
STANDHYD (5022)	Area (ha)= 51.10
ID= 1 DT= 5.0 min	Total Imp(%)= 48.00 Dir. Conn.(%)= 34.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 24.53		26.57
Dep. Storage	(mm)= 1.50		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 583.67		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59

1.417 2.38 | 2.917 61.93 | 4.417 3.18 | 5.92 1.59
1.500 2.38 | 3.000 61.93 | 4.500 3.18 | 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 12.66
over (min) 10.00 30.00

Storage Coeff. (min)= 8.92 (ii) 28.78 (ii)
Unit Hyd. Tpeak (min)= 10.00 30.00
Unit Hyd. peak (cms)= 0.12 0.04

PEAK FLOW (cms)= 2.37 0.45
TIME TO PEAK (hrs)= 3.00 3.42
RUNOFF VOLUME (mm)= 38.53 7.27
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.96 0.18

TOTALS

2.535 (iii)

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0102)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0502): 119.60 1.014 3.67 8.70
+ ID2= 2 (5022): 51.10 2.535 3.00 17.90
=====

ID = 3 (0102): 170.70 3.144 3.08 11.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0503)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->

Distance	Elevation	Manning
0.00	86.78	0.0900
25.34	87.17	0.0900
68.44	87.04	0.0900
117.13	86.81	0.0900
125.36	85.21	0.0900 / 0.0700
127.36	84.21	0.0700
128.86	84.21	0.0700
130.86	85.21	0.0700 / 0.0900
131.88	86.36	0.0900

Main Channel
Main Channel
Main Channel
Main Channel

140.63 86.77 0.0900
168.26 86.90 0.0900
169.81 87.10 0.0900
202.11 87.50 0.0900
239.06 87.35 0.0900
270.29 87.83 0.0900
283.90 87.90 0.0900
297.51 87.86 0.0900
324.73 87.89 0.0900
351.95 87.78 0.0900
388.59 87.46 0.0900

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0102)	170.70	3.14	3.08	11.45	1.00	0.90
OUTFLOW: ID= 1 (0503)	170.70	2.81	3.17	11.45	0.94	0.86

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 13.80
Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 10.49 3.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 20.79
over (min) 5.00 25.00

Storage Coeff. (min)= 6.02 (ii) 22.31 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

TOTALS

1.529 (iii)

PEAK FLOW (cms)= 1.48 0.11
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 10.67
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.27

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)

ID1= 1 (0503): 170.70 2.806 3.17 11.45
+ ID2= 2 (5032): 13.80 1.529 3.00 26.32
=====

ID = 3 (0104): 184.50 3.806 3.00 12.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (815.4) ----->

Distance	Elevation	Manning
19.10	82.03	0.0900
29.01	83.14	0.0900
40.83	82.56	0.0900
81.51	82.27	0.0900
122.18	82.68	0.0900
169.31	82.61	0.0900
217.10	82.90	0.0900
229.61	83.66	0.0900 / 0.0700
232.80	81.85	0.0700
243.24	83.87	0.0700
257.77	84.06	0.0900
312.01	83.52	0.0900
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900
513.93	82.96	0.0900
526.85	83.23	0.0900
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900

TRAVEL TIME TABLE

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13

0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90
1.95	83.80	.924E+05	324.9	0.92	4.74
2.08	83.93	.113E+06	411.3	0.95	4.59
2.21	84.06	.135E+06	515.5	1.00	4.37

<---- hydrograph ----> <-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	184.50	3.81	3.00	12.57	0.69
OUTFLOW: ID= 1 (0504)	184.50	2.94	3.25	12.57	0.65

CALIB	Area (ha)=	7.70
STANDHYD (5042)	Total Imp(%)=	75.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	65.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	5.77	1.92		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	226.57	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59

Length	(m)=	323.52	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	29.70
over (min)	5.00	25.00
Storage Coeff. (min)=	6.26 (ii)	20.38 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.19	0.05

TOTALS			
PEAK FLOW (cms)=	1.64	0.16	1.726 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	12.97	26.87
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.32	0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB

0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	19.38
over (min)	5.00	25.00
Storage Coeff. (min)=	5.05 (ii)	21.81 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.21	0.05

TOTALS			
PEAK FLOW (cms)=	0.82	0.06	0.847 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	9.84	25.56
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.25	0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)			
1 + 2 = 3	AREA	QPEAK	TPEAK
	(ha)	(cms)	(hrs)
ID1= 1 (0504):	184.50	2.944	3.25
+ ID2= 2 (5042):	7.70	0.847	3.00
ID = 3 (0106):	192.20	3.159	3.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)=	15.70
STANDHYD (5212)	Total Imp(%)=	75.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)=	66.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	11.78	3.93		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		

STANDHYD (5202)	Area (ha)=	29.70
ID= 1 DT= 5.0 min	Total Imp(%)=	50.00
	Dir. Conn.(%)=	35.00

IMPERVIOUS			PERVIOUS (i)		
Surface Area	(ha)=	14.85	14.85		
Dep. Storage	(mm)=	1.50	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	444.97	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	19.19
over (min)	10.00	25.00
Storage Coeff. (min)=	7.58 (ii)	24.40 (ii)
Unit Hyd. Tpeak (min)=	10.00	25.00
Unit Hyd. peak (cms)=	0.13	0.05

TOTALS			
PEAK FLOW (cms)=	1.48	0.42	1.682 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	38.53	10.45	20.28
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.96	0.26	0.51

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)

- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0521)			
IN= 2----> OUT= 1			
Routing time step (min)'= 5.00			
<----- DATA FOR SECTION (815.4) ----->			
Distance	Elevation	Manning	
415.18	83.86	0.0900	
461.15	83.40	0.0900	
501.83	83.53	0.0900 /0.0700	Main Channel
513.93	82.96	0.0700	Main Channel
526.85	83.23	0.0700 /0.0900	Main Channel
569.63	83.21	0.0900	
610.76	83.63	0.0900	
663.54	83.88	0.0900	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	83.00	.378E+02	0.0	0.11	83.81
0.09	83.05	.151E+03	0.0	0.17	52.79
0.14	83.09	.340E+03	0.1	0.22	40.29
0.18	83.14	.605E+03	0.3	0.27	33.26
0.23	83.18	.946E+03	0.5	0.32	28.66
0.27	83.23	.151E+04	0.9	0.33	27.77
0.32	83.27	.323E+04	1.8	0.31	29.51
0.37	83.32	.510E+04	3.2	0.34	26.44
0.42	83.37	.713E+04	5.0	0.38	23.61
0.46	83.42	.934E+04	7.3	0.42	21.44
0.51	83.47	.121E+05	10.0	0.45	20.23
0.56	83.52	.156E+05	13.4	0.47	19.44
0.61	83.57	.196E+05	17.7	0.49	18.52
0.66	83.61	.240E+05	22.8	0.52	17.49
0.71	83.66	.286E+05	28.4	0.54	16.75
0.75	83.71	.336E+05	34.7	0.56	16.14
0.80	83.76	.390E+05	41.8	0.58	15.55
0.85	83.81	.448E+05	49.8	0.60	14.99
0.90	83.86	.510E+05	58.8	0.63	14.46
<----- hydrograph ----->					
<-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5202)	29.70	1.68	3.00	0.31	0.31
OUTFLOW: ID= 1 (0521)	29.70	0.96	3.25	0.27	0.32

ADD HYD (0113)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0521):	29.70	0.956	3.25	20.26
+ ID2= 2 (5212):	15.70	1.726	3.00	26.87
=====				
ID = 3 (0113):	45.40	2.386	3.00	22.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	192.20	3.159	3.25	13.09
+ ID2= 2 (0113):	45.40	2.386	3.00	22.55
=====				
ID = 3 (0114):	237.60	5.293	3.00	14.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)			
IN= 2----> OUT= 1			
Routing time step (min)'= 5.00			
<----- DATA FOR SECTION (553.6) ----->			
Distance	Elevation	Manning	
0.00	81.24	0.1100	
33.01	80.98	0.1100	
49.97	81.27	0.1100	
54.18	80.35	0.1100	
60.88	81.23	0.1100	
69.13	79.02	0.1100	
92.42	79.04	0.1100	
98.70	80.89	0.1100	
128.88	81.13	0.1100	
199.00	81.23	0.1100	
266.11	81.68	0.1100	
306.94	81.73	0.1100	
331.74	81.55	0.1100 /0.0700	Main Channel
336.74	80.15	0.0700	Main Channel
346.34	81.64	0.0700 /0.0900	Main Channel
394.77	81.68	0.0900	
431.64	81.44	0.0900	
477.44	82.08	0.0900	

481.25 82.81 0.0900
501.51 83.16 0.0900

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35
<----- hydrograph ----->					
<-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.60	5.29	3.00	0.51	0.42
OUTFLOW: ID= 1 (0505)	237.60	4.81	3.08	0.48	0.40

CALIB			
STANDHYD (5052)			
ID= 1 DT= 5.0 min			
Area	(ha)=	15.90	
Total Imp(%)=	74.00	Dir. Conn.(%)=	65.00

IMPERVIOUS		PERVIOUS (i)
Surface Area	(ha)=	11.77
Dep. Storage	(mm)=	6.00
Average Slope	(%)=	1.00
Length	(m)=	325.58
Mannings n	=	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	17.84
over (min)	5.00	25.00
Storage Coeff. (min)=	6.28 (ii)	23.60 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.19	0.05

PEAK FLOW	(cms)=	1.64	0.11	*TOTALS*
TIME TO PEAK	(hrs)=	3.00	3.33	1.692 (iii)
RUNOFF VOLUME	(mm)=	34.03	9.46	25.43
TOTAL RAINFALL	(mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT	=	0.85	0.24	0.64

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0505):	237.60	4.806	3.08	14.89
+ ID2= 2 (5052):	15.90	1.692	3.00	25.43
=====				

ID = 3 (0108): 253.50 5.941 3.00 15.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900
45.97	80.05	0.0900
65.23	79.93	0.0900
84.49	80.35	0.0900
113.49	80.02	0.0900
136.48	80.07	0.0900
188.81	79.81	0.0900
197.86	79.25	0.0900 / 0.0700 Main Channel
200.70	78.22	0.0700 Main Channel
203.29	79.35	0.0700 / 0.0900 Main Channel
204.01	79.67	0.0900
236.47	80.40	0.0900
277.80	80.48	0.0900
305.35	80.37	0.0900
346.67	80.41	0.0900
387.99	80.33	0.0900
415.54	80.53	0.0900
447.88	80.49	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69

Max.Eff.Inten.(mm/hr)= 61.93 21.58
over (min) 5.00 25.00
Storage Coeff. (min)= 5.73 (ii) 21.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

TOTALS
PEAK FLOW (cms)= 1.22 0.10 1.272 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.86 25.92
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.27 0.65

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0506):	253.50	5.709	3.08	15.55
+ ID2= 2 (5062):	11.70	1.272	3.00	25.92
=====				
ID = 3 (0110):	265.20	6.396	3.08	16.01

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min

Area (ha)= 1.70
Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	1.09	0.61
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	106.46	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.00	81.24	0.1100					
33.01	80.98	0.1100					
49.97	81.27	0.1100					
54.18	80.35	0.1100					

2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0108)	253.50	5.94	3.00	15.55	1.32	1.17
OUTFLOW: ID= 1 (0506)	253.50	5.71	3.08	15.55	1.31	1.17

CALIB
STANDHYD (5062)
ID= 1 DT= 5.0 min

Area (ha)= 11.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS (ha)	PERVIOUS (i) (mm)
Surface Area	8.78	2.92
Dep. Storage	6.00	8.00
Average Slope	1.00	1.00
Length	279.28	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.27
over (min) 5.00 25.00
Storage Coeff. (min)= 3.21 (ii) 21.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.27 0.05

TOTALS
PEAK FLOW (cms)= 0.15 0.02 0.158 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.76 21.90
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22 0.55

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100

60.88 81.23 0.1100 /0.0700 Main Channel
69.13 79.02 0.0700 Main Channel
92.42 79.04 0.0700 Main Channel
98.70 80.89 0.0700 /0.1100 Main Channel
128.88 81.13 0.1100
199.00 81.23 0.1100

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.12	79.13	.361E+03	0.6	0.24	9.91	
0.23	79.25	.776E+03	2.1	0.40	6.09	
0.35	79.37	.121E+04	4.3	0.52	4.65	
0.47	79.48	.165E+04	7.1	0.63	3.85	
0.59	79.60	.211E+04	10.5	0.72	3.34	
0.70	79.72	.258E+04	14.4	0.81	2.98	
0.82	79.84	.307E+04	18.8	0.89	2.71	
0.94	79.95	.357E+04	23.8	0.97	2.50	
1.05	80.07	.408E+04	29.2	1.04	2.33	
1.17	80.19	.461E+04	35.1	1.10	2.19	
1.29	80.30	.515E+04	41.5	1.17	2.07	
1.41	80.42	.571E+04	48.4	1.23	1.97	
1.52	80.54	.631E+04	55.8	1.28	1.88	
1.64	80.66	.695E+04	63.8	1.33	1.81	
1.76	80.77	.762E+04	72.3	1.38	1.76	
1.87	80.89	.833E+04	81.4	1.42	1.71	
2.00	81.02	.931E+04	92.4	1.44	1.68	
2.13	81.14	.109E+05	104.8	1.39	1.74	
2.25	81.27	.140E+05	120.9	1.25	1.93	

<---- hydrograph ---->					<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.		MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)		(m)	(m/s)
INFLOW : ID= 2 (5102)	1.70	0.16	3.00	21.90	0.03	0.24
OUTFLOW: ID= 1 (0511)	1.70	0.12	3.00	21.89	0.02	0.24

CALIB	
STANDHYD (5112)	Area (ha)= 3.00
ID= 1 DT= 5.0 min	Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 2.07		0.93
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 141.42		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 20.16
over (min)= 5.00 25.00
Storage Coeff. (min)= 3.81 (ii) 20.30 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.25 0.05

TOTALS
PEAK FLOW (cms)= 0.29 0.03 0.307 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.52 24.15
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0117) |

1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0511):	1.70	0.117	3.00	21.89
+ ID2= 2 (5112):	3.00	0.307	3.00	24.15
ID = 3 (0117):	4.70	0.424	3.00	23.33

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (484.2) ----->				
Distance	Elevation	Manning		
0.00	80.80	0.0900		
9.73	80.46	0.0900		
14.10	82.04	0.0900		
17.18	82.28	0.0900		
41.13	82.12	0.0900 /0.0700	Main Channel	
46.88	79.71	0.0700	Main Channel	
51.41	80.90	0.0700 /0.0900	Main Channel	
94.29	80.56	0.0900		
175.64	80.72	0.0900		
192.09	80.85	0.0900		

TRAVEL TIME TABLE						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.13	79.84	.255E+02	0.0	0.14	54.71	
0.26	79.98	.102E+03	0.0	0.23	34.47	
0.40	80.11	.229E+03	0.1	0.30	26.30	
0.53	80.24	.408E+03	0.3	0.36	21.71	
0.66	80.37	.637E+03	0.6	0.42	18.71	
0.79	80.51	.934E+03	0.9	0.46	16.84	
0.93	80.64	.1245E+04	1.6	0.51	14.96	
1.06	80.77	.173E+04	4.6	0.55	13.51	
1.19	80.90	.179E+05	11.4	0.60	12.08	
1.32	81.04	.278E+05	22.6	0.66	10.45	
1.46	81.17	.381E+05	37.5	0.71	9.16	
1.60	81.31	.484E+05	55.4	0.77	8.13	
1.74	81.45	.588E+05	76.0	0.82	7.29	
1.87	81.59	.693E+05	99.3	0.87	6.63	
2.01	81.72	.798E+05	125.0	0.91	6.10	
2.15	81.86	.903E+05	153.1	0.95	5.68	
2.29	82.00	.101E+06	183.5	0.98	5.34	
2.42	82.14	.112E+06	214.3	1.00	5.08	
2.56	82.27	.123E+06	244.4	1.01	4.86	

<---- hydrograph ---->					<-pipe / channel->	
AREA	QPEAK	TPEAK	R.V.		MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)		(m)	(m/s)
INFLOW : ID= 2 (0511):	1.70	0.117	3.00	21.89	0.03	0.24
OUTFLOW: ID= 1 (0117):	1.70	0.12	3.00	21.89	0.02	0.24

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0117):	4.70	0.42	3.00	23.33	0.59
OUTFLOW: ID= 1 (0512):	4.70	0.23	3.00	23.27	0.47

CALIB	
STANDHYD (5122)	Area (ha)= 3.90
ID= 1 DT= 5.0 min	Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)= 2.65		1.25
Dep. Storage	(mm)= 6.00		8.00
Average Slope	(%)= 1.00		1.00
Length	(m)= 161.25		40.00
Mannings n	= 0.013		0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 19.82
over (min)= 5.00 25.00
Storage Coeff. (min)= 4.12 (ii) 20.72 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.24 0.05

TOTALS
PEAK FLOW (cms)= 0.37 0.04 0.390 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 10.44 23.88
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.26 0.60

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0512): 4.70 0.234 3.08 23.27
+ ID2= 2 (5122): 3.90 0.390 3.00 23.88
=====

ID = 3 (0119): 8.60 0.606 3.00 23.55

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0110): 265.20 6.396 3.08 16.01
+ ID2= 2 (0119): 8.60 0.606 3.00 23.55
=====

ID = 3 (0120): 273.80 6.878 3.00 16.25

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6011) Area (ha)= 44.10 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.275 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6012) Area (ha)= 11.00
ID= 1 DT= 5.0 min Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	3.08	7.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	270.80	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr

0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 8.91
over (min) 5.00 30.00
Storage Coeff. (min)= 5.63 (ii) 28.48 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.20 0.04

TOTALS
PEAK FLOW (cms)= 0.28 0.11 0.323 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.61 10.99
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.27

***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (6011): 44.10 0.275 3.92 5.47
+ ID2= 2 (6012): 11.00 0.323 3.00 10.99
=====

ID = 3 (0124): 55.10 0.372 3.75 6.57

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021) Area (ha)= 43.60 Curve Number (CN)= 62.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr

0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.247 (i)
TIME TO PEAK (hrs)= 4.083
RUNOFF VOLUME (mm)= 5.466
TOTAL RAINFALL (mm)= 40.032
RUNOFF COEFFICIENT = 0.137

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022) Area (ha)= 12.90
ID= 1 DT= 5.0 min Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 3.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 3.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 3.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 3.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 9.23
over (min) 5.00 30.00
Storage Coeff. (min)= 5.90 (ii) 28.44 (ii)
Unit Hyd. Tpeak (min)= 5.00 30.00
Unit Hyd. peak (cms)= 0.19 0.04
TOTALS
PEAK FLOW (cms)= 0.48 0.12 0.519 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 6.72 13.00
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.17 0.32

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0021): 43.60 0.247 4.08 5.47
+ ID2= 2 (0022): 12.90 0.519 3.00 13.00
=====

ID = 3 (0125): 56.50 0.549 3.00 7.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0124): 55.10 0.372 3.75 6.57
+ ID2= 2 (0125): 56.50 0.549 3.00 7.19
=====

ID = 3 (0126): 111.60 0.915 3.00 6.88

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)
IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700
130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400

252.71 91.66 0.1400
274.11 91.86 0.1400

TRAVEL TIME TABLE
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

hydrograph -----> <----- pipe / channel----->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 0.92 3.00 6.88 0.52 0.20
OUTFLOW: ID= 1 (0603) 111.60 0.52 4.83 6.88 0.48 0.20

CALIB
STANDHYD (6032)
ID= 1 DT= 5.0 min | Area (ha)= 34.60
Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 16.26 18.34
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 480.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

CALIB
STANDHYD (6102)
ID= 1 DT= 5.0 min | Area (ha)= 21.10
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.55 10.55
Dep. Storage (mm)= 1.50 8.00

Average Slope (%)= 1.00 1.00
Length (m)= 375.06 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 17.81
over (min) 5.00 25.00
Storage Coeff. (min)= 6.84 (ii) 24.17 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.18 0.05
TOTALS
PEAK FLOW (cms)= 1.15 0.28
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 38.53 9.76
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.96 0.24 0.50

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0603):	111.60	0.522	4.83	6.88
+ ID2= 2 (6032):	34.60	1.796	3.00	19.34
=====				
ID = 3 (0128):	146.20	1.970	3.00	9.83

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)				
3 + 2 = 1				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0128):	146.20	1.970	3.00	9.83
+ ID2= 2 (6102):	21.10	1.286	3.00	19.83
=====				
ID = 1 (0128):	167.30	3.256	3.00	11.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0604) |
| IN= 2----> OUT= 1 |
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->				
Distance	Elevation	Manning		
0.00	86.75	0.0900		
3.09	87.40	0.0900		
18.33	87.41	0.0900		
35.33	86.99	0.0900		
73.84	86.75	0.0900		
103.33	86.41	0.0900		
120.33	86.11	0.0900		
129.46	86.13	0.0900		
143.37	85.32	0.0900		
154.33	85.02	0.0900		
161.57	85.09	0.0900		
163.05	84.78	0.0900 / 0.0700	Main Channel	
166.55	83.78	0.0700	Main Channel	
168.05	84.78	0.0700 / 0.1100	Main Channel	
172.02	85.29	0.1100		
191.39	86.19	0.1100		
270.18	85.78	0.1100		
296.33	86.36	0.1100		
324.34	86.68	0.1100		
368.56	87.05	0.1100		

<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.17	83.95	.465E+02	0.0	0.03	432.88		
0.33	84.11	.186E+03	0.0	0.04	272.70		
0.50	84.28	.418E+03	0.0	0.05	208.11		
0.67	84.45	.743E+03	0.1	0.06	171.79		
0.83	84.61	.116E+04	0.1	0.08	148.04		
1.00	84.78	.167E+04	0.2	0.09	131.10		
1.20	84.98	.252E+04	0.4	0.10	110.62		
1.41	85.19	.469E+04	0.6	0.09	121.59		
1.61	85.39	.842E+04	1.1	0.09	126.63		
1.81	85.59	.133E+05	1.8	0.09	121.99		
2.01	85.79	.192E+05	2.7	0.10	116.68		
2.22	86.00	.298E+05	4.0	0.09	125.45		
2.42	86.20	.487E+05	5.6	0.08	143.80		
2.62	86.40	.736E+05	9.0	0.08	137.02		
2.82	86.60	.102E+06	13.1	0.09	130.82		
3.03	86.81	.136E+06	18.1	0.09	125.42		
3.23	87.01	.178E+06	24.4	0.09	121.07		
3.43	87.21	.224E+06	34.2	0.10	108.80		
3.63	87.41	.271E+06	44.8	0.11	100.89		

<---- hydrograph ----> <-pipe / channel->							
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0128)	167.30	3.26	3.00	11.09	2.10	0.09	
OUTFLOW: ID= 1 (0604)	167.30	1.18	3.08	11.08	1.63	0.09	

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB			
STANDHYD (6042)			
ID= 1 DT= 5.0 min			
Area (ha)=	24.00		
Total Imp(%)=	78.00	Dir. Conn.(%)=	69.00

IMPERVIOUS PERVIOUS (i)			
Surface Area (ha)=	18.72	5.28	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	400.00	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

ADD HYD (0130)				
1 + 2 = 3				
	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0604):	167.30	1.181	3.08	11.08
+ ID2= 2 (6042):	24.00	2.697	3.00	27.93
=====				
ID = 3 (0130):	191.30	3.728	3.00	13.19

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)			Routing time step (min)'= 5.00		
IN= 2----> OUT= 1					
----->					
<----- DATA FOR SECTION (801.4) ----->					
Distance	Elevation	Manning			
0.00	82.95	0.1100			
3.78	82.95	0.1100			
9.24	82.49	0.1100			
50.67	82.10	0.1100			
105.12	82.17	0.1100			
119.34	81.56	0.1100			
150.67	81.66	0.1100			
157.23	82.37	0.1100			
190.03	82.57	0.1100			
223.75	82.27	0.1100			
252.32	82.50	0.1100			
254.65	81.95	0.1100 / 0.0700	Main Channel		
258.15	80.95	0.0700	Main Channel		
259.65	81.95	0.0700 / 0.1100	Main Channel		
263.15	82.90	0.1100			
278.14	82.80	0.1100			
282.35	81.68	0.1100			
285.02	82.19	0.1100			
336.56	82.53	0.1100			
404.40	82.68	0.1100			

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68

Storage Coeff. (min)= 5.69 (ii) 20.26 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.20 0.05

TOTALS

PEAK FLOW (cms)= 1.14 0.12 1.199 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 12.07 25.69
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.30 0.64

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0605):	191.30	1.529	3.50	13.19
+ ID2= 2 (6112):	11.40	1.199	3.00	25.69

ID = 3 (0139):	202.70	2.312	3.00	13.89

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB				
STANDHYD (6052)				
ID= 1 DT= 5.0 min				
	Area	(ha)=	15.90	
	Total Imp(%)=	74.00	Dir. Conn.(%)=	65.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	11.77	4.13	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	325.58	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38

1.73 82.68 .109E+06 60.1 0.39 30.35

<---- hydrograph ----> <-pipe / channel->							
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
INFLOW : ID= 2 (0130)	191.30	3.73	3.00	13.19	0.93	0.30	
OUTFLOW: ID= 1 (0605)	191.30	1.53	3.50	13.19	0.79	0.25	

CALIB			
STANDHYD (6112)			
ID= 1 DT= 5.0 min			
	Area (ha)=	11.40	
	Total Imp(%)=	72.00	Dir. Conn.(%)= 62.00

	IMPERVIOUS	PERVIOUS (i)		
Surface Area	(ha)=	8.21	3.19	
Dep. Storage	(mm)=	6.00	8.00	
Average Slope	(%)=	1.00	1.00	
Length	(m)=	275.68	40.00	
Mannings n	=	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	'	hrs	mm/hr	hrs
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 27.44
over (min) 5.00 25.00

0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)= 61.93 16.60
over (min) 5.00 25.00
Storage Coeff. (min)= 6.28 (ii) 24.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.19 0.05

TOTALS

PEAK FLOW (cms)= 1.64 0.10 1.688 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.85 25.22
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.22 0.63

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0139):	202.70	2.312	3.00	13.89
+ ID2= 2 (6052):	15.90	1.688	3.00	25.22
=====				
ID = 3 (0132):	218.60	4.000	3.00	14.72

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0530)|
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (350.0) ----->			
Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 / 0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 / 0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30

<---- hydrograph ----> <-pipe / channel-->

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0132)	218.60	4.00	3.00	14.72	0.55	0.60
OUTFLOW: ID= 1 (0530)	218.60	2.98	3.08	14.71	0.48	0.54

CALIB			
STANDHYD (5302)	Area (ha)=	5.80	
ID= 1 DT= 5.0 min	Total Imp(%)=	66.00	Dir. Conn.(%)= 56.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)= 3.83	1.97
Dep. Storage	(mm)= 6.00	8.00
Average Slope	(%)= 1.00	1.00
Length	(m)= 196.64	40.00
Mannings n	= 0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	1.59	1.583	3.97	3.083	8.73	4.58	2.38
0.167	1.59	1.667	3.97	3.167	8.73	4.67	2.38
0.250	1.59	1.750	3.97	3.250	8.73	4.75	3.38
0.333	1.59	1.833	3.97	3.333	8.73	4.83	3.38
0.417	1.59	1.917	3.97	3.417	8.73	4.92	3.38
0.500	1.59	2.000	3.97	3.500	8.73	5.00	3.38
0.583	2.38	2.083	4.76	3.583	3.97	5.08	1.59
0.667	2.38	2.167	4.76	3.667	3.97	5.17	1.59
0.750	2.38	2.250	4.76	3.750	3.97	5.25	1.59
0.833	2.38	2.333	4.76	3.833	3.97	5.33	1.59
0.917	2.38	2.417	4.76	3.917	3.97	5.42	1.59
1.000	2.38	2.500	4.76	4.000	3.97	5.50	1.59
1.083	2.38	2.583	23.82	4.083	3.18	5.58	1.59
1.167	2.38	2.667	23.82	4.167	3.18	5.67	1.59
1.250	2.38	2.750	42.88	4.250	3.18	5.75	1.59
1.333	2.38	2.833	42.88	4.333	3.18	5.83	1.59
1.417	2.38	2.917	61.93	4.417	3.18	5.92	1.59
1.500	2.38	3.000	61.93	4.500	3.18	6.00	1.59

Max.Eff.Inten.(mm/hr)=	61.93	15.25
over (min)	5.00	25.00
Storage Coeff. (min)=	4.64 (ii)	23.08 (ii)
Unit Hyd. Tpeak (min)=	5.00	25.00
Unit Hyd. peak (cms)=	0.22	0.05

TOTALS			
PEAK FLOW (cms)=	0.54	0.05	0.558 (iii)
TIME TO PEAK (hrs)=	3.00	3.33	3.00
RUNOFF VOLUME (mm)=	34.03	8.49	22.79
TOTAL RAINFALL (mm)=	40.03	40.03	40.03
RUNOFF COEFFICIENT =	0.85	0.21	0.57

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0530):	218.60	2.978	3.08	14.71
+ ID2= 2 (5302):	5.80	0.558	3.00	22.79
ID = 3 (0134):	224.40	3.244	3.08	14.92

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0120):	273.80	6.878	3.00	16.25
+ ID2= 2 (0134):	224.40	3.244	3.08	14.92
ID = 3 (0135):	498.20	10.110	3.00	15.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)		Routing time step (min)'= 5.00
IN= 2----> OUT= 1		
<----- DATA FOR SECTION (40.0) ----->		
Distance	Elevation	Manning
0.00	79.36	0.0900
7.45	79.32	0.0900
13.77	79.27	0.0900
20.24	79.24	0.0900

<----- TRAVEL TIME TABLE ----->							
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME		
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)		
0.16	76.44	.113E+03	0.0	0.14	88.10		
0.32	76.60	.451E+03	0.1	0.23	55.50		
0.49	76.76	.101E+04	0.4	0.30	42.35		
0.65	76.92	.180E+04	0.9	0.37	34.57		
0.81	77.09	.276E+04	1.6	0.44	28.86		
0.97	77.25	.388E+04	2.7	0.52	24.37		
1.14	77.41	.516E+04	4.0	0.59	21.56		
1.30	77.57	.660E+04	5.7	0.66	19.26		
1.46	77.74	.822E+04	7.8	0.72	17.67		
1.62	77.90	.100E+05	10.1	0.77	16.48		
1.79	78.06	.120E+05	12.8	0.82	15.54		
1.95	78.22	.141E+05	15.9	0.87	14.74		
2.11	78.39	.163E+05	19.4	0.91	14.06		
2.27	78.55	.187E+05	23.2	0.95	13.47		
2.44	78.71	.212E+05	27.3	0.99	12.95		
2.60	78.87	.239E+05	31.9	1.02	12.50		
2.76	79.04	.267E+05	36.8	1.06	12.10		
2.92	79.20	.320E+05	39.4	0.94	13.56		
3.09	79.36	.409E+05	45.7	0.85	14.94		

<---- hydrograph ----> <-pipe / channel-->							
INFLOW : ID= 2 (0135)	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL	
OUTFLOW: ID= 1 (0507)	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)	
	498.20	10.11	3.00	15.65	1.62	0.77	
	498.20	7.86	3.42	15.65	1.47	0.72	

CALIB
STANDHYD (5072) | Area (ha)= 48.90
ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 36.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 24.45 24.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 570.96 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 2.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 2.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 2.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 2.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59
1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 20.04
over (min) 10.00 30.00
Storage Coeff. (min)= 8.00 (ii) 25.33 (ii)
Unit Hyd. Tpeak (min)= 10.00 30.00
Unit Hyd. peak (cms)= 0.12 0.04
PEAK FLOW (cms)= 2.41 0.69
TIME TO PEAK (hrs)= 3.00 3.42
RUNOFF VOLUME (mm)= 34.03 11.03
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.28
TOTALS
PEAK FLOW (cms)= 2.41 0.69 2.677 (iii)
TIME TO PEAK (hrs)= 3.00 3.42 3.00
RUNOFF VOLUME (mm)= 34.03 11.03 19.31
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.28 0.48

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:

1.250 2.38 2.750 42.88 4.250 3.18 5.75 1.59
1.333 2.38 2.833 42.88 4.333 3.18 5.83 1.59
1.417 2.38 2.917 61.93 4.417 3.18 5.92 1.59
1.500 2.38 3.000 61.93 4.500 3.18 6.00 1.59

Max.Eff.Inten.(mm/hr)= 61.93 15.40
over (min) 5.00 25.00
Storage Coeff. (min)= 5.37 (ii) 23.73 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.21 0.05
PEAK FLOW (cms)= 0.53 0.11
TIME TO PEAK (hrs)= 3.00 3.33
RUNOFF VOLUME (mm)= 34.03 8.53
TOTAL RAINFALL (mm)= 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.21
TOTALS
PEAK FLOW (cms)= 0.53 0.11 0.585 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 34.03 8.53 17.45
TOTAL RAINFALL (mm)= 40.03 40.03 40.03
RUNOFF COEFFICIENT = 0.85 0.21 0.44

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505) | AREA (ha)= 30.00
ID= 1 DT= 5.0min | QPEAK (cms)= 0.78
TPEAK (hrs)= 15.58
VOLUME (mm)= 402.14

TIME FLOW TIME FLOW TIME FLOW TIME FLOW
hrs cms hrs cms hrs cms hrs cms
0.00 0.00 31.33 0.10 62.67 0.25 94.00 0.26
0.08 0.00 31.42 0.10 62.75 0.25 94.08 0.26
0.17 0.00 31.50 0.10 62.83 0.25 94.17 0.25
0.25 0.00 31.58 0.10 62.92 0.25 94.25 0.25
0.33 0.00 31.67 0.10 63.00 0.25 94.33 0.25
0.42 0.00 31.75 0.10 63.08 0.25 94.42 0.25
0.50 0.00 31.83 0.10 63.17 0.25 94.50 0.25
0.58 0.00 31.92 0.10 63.25 0.24 94.58 0.25
0.67 0.00 32.00 0.10 63.33 0.24 94.67 0.24
0.75 0.00 32.08 0.10 63.42 0.24 94.75 0.25
0.83 0.00 32.17 0.10 63.50 0.23 94.83 0.24
0.92 0.00 32.25 0.10 63.58 0.24 94.92 0.25
1.00 0.00 32.33 0.10 63.67 0.24 95.00 0.25
1.08 0.00 32.42 0.10 63.75 0.24 95.08 0.25
1.17 0.00 32.50 0.10 63.83 0.23 95.17 0.24
1.25 0.00 32.58 0.10 63.92 0.23 95.25 0.21
1.33 0.00 32.67 0.10 64.00 0.23 95.33 0.25

CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122) | AREA (ha)= 9.40
1 + 2 = 3 | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00
ID1= 1 (0507): 498.20 7.865 3.42 15.65
+ ID2= 2 (5072): 48.90 2.677 3.00 19.31
ID = 3 (0122): 547.10 9.367 3.17 15.98

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5402) | Area (ha)= 9.40
ID= 1 DT= 5.0 min | Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.70 4.70
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 250.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 1.59 1.583 3.97 3.083 8.73 4.58 2.38
0.167 1.59 1.667 3.97 3.167 8.73 4.67 2.38
0.250 1.59 1.750 3.97 3.250 8.73 4.75 2.38
0.333 1.59 1.833 3.97 3.333 8.73 4.83 2.38
0.417 1.59 1.917 3.97 3.417 8.73 4.92 2.38
0.500 1.59 2.000 3.97 3.500 8.73 5.00 2.38
0.583 2.38 2.083 4.76 3.583 3.97 5.08 1.59
0.667 2.38 2.167 4.76 3.667 3.97 5.17 1.59
0.750 2.38 2.250 4.76 3.750 3.97 5.25 1.59
0.833 2.38 2.333 4.76 3.833 3.97 5.33 1.59
0.917 2.38 2.417 4.76 3.917 3.97 5.42 1.59
1.000 2.38 2.500 4.76 4.000 3.97 5.50 1.59
1.083 2.38 2.583 23.82 4.083 3.18 5.58 1.59
1.167 2.38 2.667 23.82 4.167 3.18 5.67 1.59

1.42 0.00 32.75 0.10 64.08 0.23 95.42 0.22
1.50 0.00 32.83 0.10 64.17 0.23 95.50 0.23
1.58 0.00 32.92 0.10 64.25 0.24 95.58 0.22
1.67 0.00 33.00 0.10 64.33 0.23 95.67 0.24
1.75 0.00 33.08 0.10 64.42 0.23 95.75 0.26
1.83 0.00 33.17 0.10 64.50 0.23 95.83 0.24
1.92 0.00 33.25 0.11 64.58 0.23 95.92 0.23
2.00 0.00 33.33 0.11 64.67 0.24 96.00 0.24
2.08 0.00 33.42 0.11 64.75 0.24 96.08 0.24
2.17 0.00 33.50 0.11 64.83 0.24 96.17 0.24
2.25 0.00 33.58 0.11 64.92 0.24 96.25 0.24
2.33 0.00 33.67 0.11 65.00 0.24 96.33 0.24
2.42 0.00 33.75 0.11 65.08 0.23 96.42 0.24
2.50 0.00 33.83 0.11 65.17 0.23 96.50 0.24
2.58 0.00 33.92 0.11 65.25 0.23 96.58 0.23
2.67 0.00 34.00 0.11 65.33 0.23 96.67 0.24
2.75 0.00 34.08 0.11 65.42 0.22 96.75 0.23
2.83 0.00 34.17 0.11 65.50 0.22 96.83 0.23
2.92 0.00 34.25 0.11 65.58 0.22 96.92 0.24
3.00 0.00 34.33 0.11 65.67 0.22 97.00 0.23
3.08 0.00 34.42 0.11 65.75 0.22 97.08 0.22
3.17 0.00 34.50 0.11 65.83 0.22 97.17 0.23
3.25 0.00 34.58 0.11 65.92 0.21 97.25 0.22
3.33 0.00 34.67 0.11 66.00 0.21 97.33 0.25
3.42 0.00 34.75 0.11 66.08 0.21 97.42 0.22
3.50 0.00 34.83 0.11 66.17 0.20 97.50 0.24
3.58 0.00 34.92 0.11 66.25 0.20 97.58 0.23
3.67 0.00 35.00 0.11 66.33 0.20 97.67 0.22
3.75 0.00 35.08 0.11 66.42 0.20 97.75 0.23
3.83 0.00 35.17 0.11 66.50 0.19 97.83 0.22
3.92 0.00 35.25 0.11 66.58 0.20 97.92 0.21
4.00 0.00 35.33 0.11 66.67 0.20 98.00 0.22
4.08 0.00 35.42 0.11 66.75 0.20 98.08 0.23
4.17 0.00 35.50 0.11 66.83 0.19 98.17 0.21
4.25 0.00 35.58 0.11 66.92 0.19 98.25 0.21
4.33 0.00 35.67 0.11 67.00 0.20 98.33 0.23
4.42 0.00 35.75 0.11 67.08 0.20 98.42 0.21
4.50 0.00 35.83 0.11 67.17 0.20 98.50 0.21
4.58 0.00 35.92 0.11 67.25 0.20 98.58 0.23
4.67 0.00 36.00 0.11 67.33 0.20 98.67 0.22
4.75 0.00 36.08 0.11 67.42 0.21 98.75 0.23
4.83 0.00 36.17 0.11 67.50 0.22 98.83 0.24
4.92 0.00 36.25 0.11 67.58 0.22 98.92 0.22
5.00 0.00 36.33 0.11 67.67 0.23 99.00 0.20
5.08 0.00 36.42 0.12 67.75 0.24 99.08 0.20
5.17 0.00 36.50 0.12 67.83 0.26 99.17 0.22
5.25 0.00 36.58 0.12 67.92 0.27 99.25 0.21
5.33 0.00 36.67 0.12 68.00 0.28 99.33 0.22
5.42 0.00 36.75 0.12 68.08 0.31 99.42 0.21
5.50 0.00 36.83 0.12 68.17 0.32 99.50 0.20

22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11
22.58	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.67	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11

26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10

30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

STORE HYD(1605)				AREA		(ha)=		30.00	
ID= 1 DT= 5.0min				QPEAK		(cms)=		1.37	
				TPEAK		(hrs)=		71.92	
				VOLUME		(mm)=		625.27	

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24

23.50 0.34 54.75 0.51 86.00 0.84 117.25 0.16 148.50 0.13
23.58 0.33 54.83 0.52 86.08 0.83 117.33 0.16 148.58 0.13
23.67 0.33 54.92 0.53 86.17 0.82 117.42 0.16 148.67 0.13
23.75 0.32 55.00 0.53 86.25 0.81 117.50 0.16 148.75 0.13
23.83 0.32 55.08 0.54 86.33 0.81 117.58 0.16 148.83 0.13
23.92 0.32 55.17 0.55 86.42 0.79 117.67 0.16 148.92 0.13
24.00 0.31 55.25 0.55 86.50 0.78 117.75 0.16 149.00 0.13
24.08 0.31 55.33 0.55 86.58 0.77 117.83 0.16 149.08 0.13
24.17 0.30 55.42 0.56 86.67 0.76 117.92 0.16 149.17 0.13
24.25 0.30 55.50 0.56 86.75 0.74 118.00 0.16 149.25 0.12
24.33 0.30 55.58 0.57 86.83 0.74 118.08 0.16 149.33 0.12
24.42 0.30 55.67 0.57 86.92 0.73 118.17 0.16 149.42 0.12
24.50 0.29 55.75 0.58 87.00 0.71 118.25 0.16 149.50 0.12
24.58 0.29 55.83 0.58 87.08 0.71 118.33 0.16 149.58 0.12
24.67 0.29 55.92 0.58 87.17 0.70 118.42 0.16 149.67 0.12
24.75 0.28 56.00 0.58 87.25 0.68 118.50 0.16 149.75 0.12
24.83 0.28 56.08 0.58 87.33 0.68 118.58 0.15 149.83 0.12
24.92 0.28 56.17 0.58 87.42 0.66 118.67 0.15 149.92 0.12
25.00 0.27 56.25 0.58 87.50 0.66 118.75 0.15 150.00 0.12
25.08 0.27 56.33 0.58 87.58 0.65 118.83 0.15 150.08 0.12
25.17 0.27 56.42 0.58 87.67 0.64 118.92 0.15 150.17 0.12
25.25 0.27 56.50 0.59 87.75 0.63 119.00 0.15 150.25 0.12
25.33 0.26 56.58 0.59 87.83 0.62 119.08 0.15 150.33 0.12
25.42 0.26 56.67 0.59 87.92 0.62 119.17 0.15 150.42 0.12
25.50 0.26 56.75 0.59 88.00 0.61 119.25 0.15 150.50 0.12
25.58 0.25 56.83 0.59 88.08 0.60 119.33 0.15 150.58 0.12
25.67 0.25 56.92 0.59 88.17 0.59 119.42 0.15 150.67 0.12
25.75 0.25 57.00 0.59 88.25 0.58 119.50 0.15 150.75 0.12
25.83 0.25 57.08 0.59 88.33 0.58 119.58 0.15 150.83 0.12
25.92 0.25 57.17 0.59 88.42 0.57 119.67 0.15 150.92 0.12
26.00 0.24 57.25 0.59 88.50 0.57 119.75 0.15 151.00 0.12
26.08 0.24 57.33 0.59 88.58 0.56 119.83 0.16 151.08 0.12
26.17 0.24 57.42 0.59 88.67 0.55 119.92 0.16 151.17 0.12
26.25 0.24 57.50 0.59 88.75 0.55 120.00 0.16 151.25 0.12
26.33 0.23 57.58 0.58 88.83 0.54 120.08 0.16 151.33 0.12
26.42 0.23 57.67 0.58 88.92 0.53 120.17 0.16 151.42 0.12
26.50 0.23 57.75 0.58 89.00 0.53 120.25 0.16 151.50 0.12
26.58 0.23 57.83 0.57 89.08 0.52 120.33 0.16 151.58 0.12
26.67 0.23 57.92 0.57 89.17 0.51 120.42 0.16 151.67 0.12
26.75 0.22 58.00 0.57 89.25 0.51 120.50 0.16 151.75 0.12
26.83 0.22 58.08 0.57 89.33 0.50 120.58 0.16 151.83 0.12
26.92 0.22 58.17 0.56 89.42 0.50 120.67 0.16 151.92 0.12
27.00 0.22 58.25 0.56 89.50 0.49 120.75 0.16 152.00 0.12
27.08 0.22 58.33 0.56 89.58 0.48 120.83 0.16 152.08 0.12
27.17 0.21 58.42 0.55 89.67 0.48 120.92 0.16 152.17 0.12
27.25 0.21 58.50 0.55 89.75 0.47 121.00 0.16 152.25 0.12
27.33 0.21 58.58 0.54 89.83 0.47 121.08 0.16 152.33 0.11
27.42 0.21 58.67 0.54 89.92 0.47 121.17 0.17 152.42 0.11
27.50 0.21 58.75 0.53 90.00 0.47 121.25 0.17 152.50 0.11
27.58 0.21 58.83 0.53 90.08 0.46 121.33 0.17 152.58 0.11

27.67 0.20 58.92 0.52 90.17 0.46 121.42 0.17 152.67 0.11
27.75 0.20 59.00 0.52 90.25 0.45 121.50 0.17 152.75 0.11
27.83 0.20 59.08 0.52 90.33 0.45 121.58 0.17 152.83 0.11
27.92 0.20 59.17 0.51 90.42 0.44 121.67 0.17 152.92 0.11
28.00 0.19 59.25 0.51 90.50 0.44 121.75 0.17 153.00 0.11
28.08 0.19 59.33 0.50 90.58 0.44 121.83 0.17 153.08 0.11
28.17 0.19 59.42 0.50 90.67 0.43 121.92 0.17 153.17 0.11
28.25 0.19 59.50 0.49 90.75 0.43 122.00 0.17 153.25 0.11
28.33 0.19 59.58 0.49 90.83 0.43 122.08 0.17 153.33 0.11
28.42 0.19 59.67 0.49 90.92 0.43 122.17 0.17 153.42 0.11
28.50 0.19 59.75 0.48 91.00 0.42 122.25 0.18 153.50 0.11
28.58 0.18 59.83 0.48 91.08 0.42 122.33 0.18 153.58 0.11
28.67 0.18 59.92 0.47 91.17 0.42 122.42 0.18 153.67 0.11
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28.92 0.18 60.17 0.46 91.42 0.41 122.67 0.18 153.92 0.11
29.00 0.18 60.25 0.46 91.50 0.41 122.75 0.18 154.00 0.11
29.08 0.18 60.33 0.45 91.58 0.41 122.83 0.18 154.08 0.11
29.17 0.18 60.42 0.45 91.67 0.41 122.92 0.18 154.17 0.11
29.25 0.17 60.50 0.44 91.75 0.41 123.00 0.18 154.25 0.11
29.33 0.17 60.58 0.44 91.83 0.40 123.08 0.18 154.33 0.11
29.42 0.17 60.67 0.44 91.92 0.40 123.17 0.18 154.42 0.11
29.50 0.17 60.75 0.43 92.00 0.40 123.25 0.18 154.50 0.11
29.58 0.17 60.83 0.43 92.08 0.40 123.33 0.18 154.58 0.11
29.67 0.17 60.92 0.42 92.17 0.40 123.42 0.18 154.67 0.11
29.75 0.17 61.00 0.42 92.25 0.39 123.50 0.18 154.75 0.11
29.83 0.17 61.08 0.42 92.33 0.39 123.58 0.18 154.83 0.11
29.92 0.16 61.17 0.42 92.42 0.39 123.67 0.18 154.92 0.11
30.00 0.16 61.25 0.41 92.50 0.39 123.75 0.18 155.00 0.11
30.08 0.16 61.33 0.41 92.58 0.38 123.83 0.18 155.08 0.11
30.17 0.16 61.42 0.40 92.67 0.38 123.92 0.18 155.17 0.11
30.25 0.16 61.50 0.40 92.75 0.38 124.00 0.18 155.25 0.11
30.33 0.16 61.58 0.40 92.83 0.38 124.08 0.18 155.33 0.11
30.42 0.16 61.67 0.40 92.92 0.38 124.17 0.18 155.42 0.11
30.50 0.16 61.75 0.39 93.00 0.37 124.25 0.18 155.50 0.11
30.58 0.16 61.83 0.39 93.08 0.37 124.33 0.19 155.58 0.11
30.67 0.16 61.92 0.39 93.17 0.37 124.42 0.19 155.67 0.11
30.75 0.16 62.00 0.38 93.25 0.37 124.50 0.19 155.75 0.11
30.83 0.15 62.08 0.38 93.33 0.37 124.58 0.19 155.83 0.10
30.92 0.15 62.17 0.38 93.42 0.37 124.67 0.20 155.92 0.11
31.00 0.15 62.25 0.38 93.50 0.37 124.75 0.20 156.00 0.10
31.08 0.15 62.33 0.39 93.58 0.37 124.83 0.20
31.17 0.15 62.42 0.39 93.67 0.37 124.92 0.20

V V I SSSSS U U A L (v 6.2.2018)
V V I SS U U A A L
V V I SS U U AAAAA L

V V I SS U U A A L
WV I SSSSS UUUUU A A LLLLL
000 TTTT TTTT H H Y Y M M 000 TM
O O T T H H Y Y MM MM O O
O O T T H H Y M M O O
000 T T H H Y M M 000
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voin.dat

Output filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\9353c90b-9af3-4da1-a4ff-7d1c39f765f1\

Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\XH5\860df144-956f-4cfc-88fc-f31f1a71e94a\9353c90b-9af3-4da1-a4ff-7d1c39f765f1\

DATE: 04-10-2024 TIME: 01:25:33

USER:

COMMENTS:

** SIMULATION : 50yrI16.stm **

READ STORM
Ptotal= 91.90 mm
Filename: C:\Users\jannaormond\AppData\Local\Temp\5b66f7bc-e58d-45d3-b0f6-6b3e1edcbf8b\as5d16dec
Comments: Mount Hope-6 hour SCS Distribution Desig

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.00	3.68	1.50	9.19	3.00	20.22	4.50	5.51

0.17	3.68	1.67	9.19	3.17	20.22	4.67	5.51
0.33	3.68	1.83	9.19	3.33	20.22	4.83	5.51
0.50	5.51	2.00	11.03	3.50	9.19	5.00	3.68
0.67	5.51	2.17	11.03	3.67	9.19	5.17	3.68
0.83	5.51	2.33	11.03	3.83	9.19	5.33	3.68
1.00	5.51	2.50	55.14	4.00	7.35	5.50	3.68
1.17	5.51	2.67	99.25	4.17	7.35	5.67	3.68
1.33	5.51	2.83	143.36	4.33	7.35	5.83	3.68

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 3.123 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 31.899
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.347

RUNOFF COEFFICIENT = 0.93 0.40 0.53

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB					
STANDHYD (	5012)	Area	(ha)=	39.40	
ID= 1 DT= 5.0 min		Total Imp(%)=	38.00	Dir. Conn.(%)=	24.00
		IMPERVIOUS		PERVIOUS (i)	
Surface Area	(ha)=	14.97	24.43		
Dep. Storage	(mm)=	6.00	8.00		
Average Slope	(%)=	1.00	1.00		
Length	(m)=	512.51	40.00		
Mannings n	=	0.013	0.250		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

ADD HYD (0100)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	3.123	3.83	31.90
+ ID2= 2 (5012):	39.40	6.214	3.00	48.74
ID = 3 (0100):	119.60	6.950	3.00	37.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```

ROUTE CHN( 0502) |
| IN= 2----> OUT= 1 |
|-----|
|
|<----- DATA FOR SECTION (1537.5) ----->
|Distance          Elevation      Manning
|0.00              89.30          0.1100
|4.20              89.28          0.1100
|9.03              88.80          0.1100
|21.55             88.78          0.1100
|29.06             88.24          0.1100
|39.87             87.83          0.1100
|55.54             87.84          0.1100 /0.0700 Main Channel
|57.54             86.84          0.0700 Main Channel
|59.04             86.84          0.0700 Main Channel
|61.04             87.84          0.0700 /0.1100 Main Channel
|74.10             87.86          0.1100
|87.72             88.07          0.1100
|101.34            88.18          0.1100
|113.53            88.23          0.1100
|128.57            88.32          0.1100
|142.19            88.61          0.1100
|155.81            88.53          0.1100
|183.05            88.85          0.1100
|187.19            88.84          0.1100
|211.21            88.88          0.1100
|

```

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV. TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.282E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.28
0.50	87.34	.149E+04	0.8	0.62	32.16
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.489E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.23	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

```
<---- hydrograph ---->    <-pipe / channel->
```

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R. V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0100)	119.60	6.95	3.00	37.45	1.21	0.56
OUTFLOW : ID= 1 (0502)	119.60	4.38	4.00	37.44	1.09	0.65

```
<---- hydrograph ---->    <-pipe / channel->
```

CALIB			
STANDHYD (5022)		Area (ha)=	51.10
ID= 1 DT= 5.0 min		Total Imp(%)=	48.00 Dir. Conn.(%)= 34.00
		IMPERVIOUS	PERVIOUS (i)
Surface Area	(ha)=	24.53	26.57
Dep. Storage	(mm)=	1.50	8.00
Average Slope	(%)=	1.00	1.00
Length	(m)=	583.67	40.00
Mannings n	=	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----								
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr		hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19		3.083	20.22	4.58	5.51

0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max. Eff. Inten. (mm/hr)=	143.36	88.42	
over (min)	5.00	20.00	
Storage Coeff. (min)=	6.37 (ii)	15.50 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.18	0.07	
			TOTALS
PEAK FLOW (cms)=	6.36	3.31	8.668 (iii)
TIME TO PEAK (hrs)=	3.00	3.17	3.00
RUNOFF VOLUME (mm)=	90.40	35.18	53.96
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.98	0.38	0.59

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0102)	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
1 + 2 = 3				
ID1= 1 (0502):	119.60	4.377	4.00	37.44
+ ID2= 2 (0522):	51.10	8.668	3.00	53.96
=====				
ID = 3 (0102):	170.70	11.143	3.00	42.39

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ROUTE CHN( 0503)|
| IN= 2----> OUT= 1 |
-----
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->
Distance      Elevation      Manning
0.00          86.78        0.0900
25.34         87.17        0.0900
68.44         87.04        0.0900
117.13        86.81        0.0900
125.36        85.21        0.0900 / 0.0700 Main Channel
127.36        84.21        0.0700 Main Channel
128.86        84.21        0.0700 Main Channel
130.86        85.21        0.0700 / 0.0900 Main Channel
131.88        86.36        0.0900
140.63        86.77        0.0900
168.26        86.90        0.0900
169.81        87.10        0.0900
202.11        87.50        0.0900
239.06        87.35        0.0900
270.29        87.83        0.0900
283.90        87.90        0.0900
297.51        87.86        0.0900
324.73        87.89        0.0900
351.95        87.78        0.0900
388.59        87.46        0.0900
```

```
<----- TRAVEL TIME TABLE ----->
DEPTH      ELEV      VOLUME      FLOW RATE      VELOCITY      TRAV.TIME
(m)         (m)         (cu.m.)      (cms)          (m/s)         (min)
0.17  84.38  .114E+03    0.1            0.34          18.34
0.33  84.54  .269E+03    0.4            0.50          12.51
0.50  84.71  .465E+03    0.8            0.62          10.07
0.67  84.88  .703E+03    1.4            0.72           8.63
0.83  85.04  .982E+03    2.1            0.81           7.65
1.00  85.21  .130E+04    3.1            0.89           6.93
1.21  85.42  .177E+04    5.0            1.06           5.87
1.41  85.62  .234E+04    7.4            1.17           5.28
1.62  85.83  .300E+04   10.2           1.27           4.89
1.83  86.04  .376E+04   13.6           1.35           4.60
2.03  86.24  .462E+04   17.6           1.42           4.37
2.24  86.45  .560E+04   22.1           1.47           4.22
2.45  86.66  .695E+04   27.6           1.48           4.20
2.66  86.87  .925E+04   31.2           1.25           4.94
2.86  87.07  .168E+05   43.1           0.96           6.48
3.07  87.28  .297E+05   67.7           0.85           7.30
3.28  87.49  .456E+05  103.1           0.84           7.38
3.48  87.69  .663E+05  159.6           0.89           6.93
3.69  87.90  .907E+05  223.4           0.92           6.77
```

```
Unit Hyd. peak (cms)= 0.23 0.12
PEAK FLOW (cms)= 3.56 0.80
TIME TO PEAK (hrs)= 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 45.87
TOTAL RAINFALL (mm)= 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.50
*TOTALS*
4.361 (iii)
3.00
72.69
91.90
0.79
```

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

```
-----
| ADD HYD ( 0104)|
| 1 + 2 = 3 |
-----
ID1= 1 ( 0503): 170.70 10.123 3.08 42.39
+ ID2= 2 ( 5032): 13.80 4.361 3.00 72.69
-----
ID = 3 ( 0104): 184.50 13.853 3.00 44.65
```

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

```
-----
| ROUTE CHN( 0504)|
| IN= 2----> OUT= 1 |
-----
Routing time step (min)'= 5.00

<----- DATA FOR SECTION ( 815.4) ----->
Distance      Elevation      Manning
19.10         82.03        0.0900
29.01         83.14        0.0900
40.83         82.56        0.0900
81.51         82.27        0.0900
122.18        82.68        0.0900
169.31        82.61        0.0900
217.10        82.90        0.0900
229.61        83.66        0.0900 / 0.0700 Main Channel
232.80        81.85        0.0700 Main Channel
243.24        83.87        0.0700 Main Channel
257.77        84.06        0.0900
312.01        83.52        0.0900
415.18        83.86        0.0900
461.15        83.40        0.0900
501.83        83.53        0.0900
```

```
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 ( 0102) 170.70 11.14 3.00 42.39 1.68 1.29
OUTFLOW: ID= 1 ( 0503) 170.70 10.12 3.08 42.39 1.61 1.26
```

```
-----
| CALIB
| STANDHYD ( 5032)|
| ID= 1 DT= 5.0 min |
-----
Area (ha)= 13.80
Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00
```

```
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.49 3.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

```
----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 20.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 20.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 20.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 20.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 20.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 20.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 20.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 20.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 20.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 20.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 20.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 20.19 6.00 3.68
```

```
Max.Eff.Inten.(mm/hr)= 143.36 124.37
over (min)= 5.00 10.00
Storage Coeff. (min)= 4.30 (ii) 9.29 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
```

```
513.93 82.96 0.0900
526.85 83.23 0.0900
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900
```

```
<----- TRAVEL TIME TABLE ----->
DEPTH      ELEV      VOLUME      FLOW RATE      VELOCITY      TRAV.TIME
(m)         (m)         (cu.m.)      (cms)          (m/s)         (min)
0.11  81.96  .117E+02    0.0            0.18          23.95
0.23  82.08  .492E+02    0.1            0.28          15.67
0.34  82.19  .135E+03    0.2            0.34          13.00
0.45  82.30  .312E+03    0.4            0.32          13.44
0.57  82.42  .116E+04    1.2            0.28          15.74
0.68  82.53  .287E+04    3.5            0.32          13.85
0.79  82.64  .549E+04    7.0            0.33          13.13
0.91  82.76  .101E+05   14.9           0.39          11.28
1.02  82.87  .155E+05   27.5           0.47          9.38
1.13  82.98  .214E+05   45.2           0.55          7.89
1.25  83.10  .277E+05   67.2           0.64          6.87
1.36  83.21  .344E+05   93.6           0.71          6.12
1.47  83.32  .426E+05  125.3           0.77          5.67
1.59  83.44  .516E+05  162.2           0.82          5.30
1.70  83.55  .620E+05  204.2           0.86          5.06
1.81  83.66  .747E+05  254.0           0.89          4.90
1.95  83.80  .924E+05  324.9           0.92          4.74
2.08  83.93  .113E+06  411.3           0.95          4.59
2.21  84.06  .135E+06  515.5           1.00          4.37
```

```
<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 ( 0104) 184.50 13.85 3.00 44.65 0.89 0.38
OUTFLOW: ID= 1 ( 0504) 184.50 10.53 3.17 44.65 0.84 0.35
```

```
-----
| CALIB
| STANDHYD ( 5042)|
| ID= 1 DT= 5.0 min |
-----
Area (ha)= 7.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00
```

```
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 5.77 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00
Mannings n = 0.013 0.250
```

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Max.Eff.Inten.(mm/hr)= 143.36 119.56
over (min) 5.00 15.00
Storage Coeff. (min)= 3.61 (ii) 11.70 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.09

TOTALS

PEAK FLOW (cms)= 1.95 0.39 2.281 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 43.30 70.99
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.47 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)
1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.

TOTALS

PEAK FLOW (cms)= 3.97 0.93 4.774 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 52.18 74.43
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.57 0.81

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min

Area (ha)=	29.70
Total Imp(%)=	50.00
Dir. Conn.(%)=	35.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	14.85 14.85
Dep. Storage (mm)=	1.50 8.00
Average Slope (%)=	1.00 1.00
Length (m)=	444.97 40.00
Mannings n	= 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0504):	184.50	10.534	3.17	44.65
+ ID2= 2 (5042):	7.70	2.281	3.00	70.99
ID = 3 (0106):	192.20	11.293	3.17	45.71

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min

Area (ha)=	15.70
Total Imp(%)=	75.00
Dir. Conn.(%)=	66.00

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.78 3.93
Dep. Storage (mm)=	6.00 8.00
Average Slope (%)=	1.00 1.00
Length (m)=	323.52 40.00
Mannings n	= 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----									
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51		
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51		
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51		
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51		
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51		
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51		
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68		
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68		
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68		
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68		
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68		
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68		
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68		
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68		
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68		
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68		
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68		
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68		

Max.Eff.Inten.(mm/hr)= 143.36 139.26
over (min) 5.00 15.00
Storage Coeff. (min)= 4.47 (ii) 12.09 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.23 0.09

1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 116.83
over (min) 5.00 15.00
Storage Coeff. (min)= 5.42 (ii) 13.58 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 3.90 2.77 6.230 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 90.40 45.46 61.19
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.98 0.49 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0521)
IN= 2----> OUT= 1

Routing time step (min)'= 5.00

----- DATA FOR SECTION (815.4) -----

Distance	Elevation	Manning
415.18	83.86	0.0900
461.15	83.40	0.0900
501.83	83.53	0.0900 / 0.0700
513.93	82.96	0.0700
526.85	83.23	0.0700 / 0.0900
569.63	83.21	0.0900
610.76	83.63	0.0900
663.54	83.88	0.0900

----- TRAVEL TIME TABLE -----

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.05	83.00	.378E+02	0.0	0.11	83.81
0.09	83.05	.151E+03	0.0	0.17	52.79
0.14	83.09	.340E+03	0.1	0.22	40.29
0.18	83.14	.605E+03	0.3	0.27	33.26
0.23	83.18	.946E+03	0.5	0.32	28.66
0.27	83.23	.151E+04	0.9	0.33	27.77
0.32	83.27	.323E+04	1.8	0.31	29.51
0.37	83.32	.510E+04	3.2	0.34	26.44
0.42	83.37	.713E+04	5.0	0.38	23.61

0.46	83.42	.934E+04	7.3	0.42	21.44
0.51	83.47	.121E+05	10.0	0.45	20.23
0.56	83.52	.156E+05	13.4	0.47	19.44
0.61	83.57	.196E+05	17.7	0.49	18.52
0.66	83.61	.240E+05	22.8	0.52	17.49
0.71	83.66	.286E+05	28.4	0.54	16.75
0.75	83.71	.336E+05	34.7	0.56	16.14
0.80	83.76	.390E+05	41.8	0.58	15.55
0.85	83.81	.448E+05	49.8	0.60	14.99
0.90	83.86	.510E+05	58.8	0.63	14.46

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (5202)	29.70	6.23	3.00	61.19	0.44	0.40
OUTFLOW : ID= 1 (0521)	29.70	3.32	3.17	61.17	0.37	0.34

ADD HYD (0113)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0521):	29.70	3.316	3.17	61.17
+ ID2= 2 (5212):	15.70	4.774	3.00	74.43
ID = 3 (0113):	45.40	7.406	3.00	65.76

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0106):	192.20	11.293	3.17	45.71
+ ID2= 2 (0113):	45.40	7.406	3.00	65.76
ID = 3 (0114):	237.60	18.103	3.00	49.54

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)	Routing time step (min)'= 5.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning

CALIB	Area (ha)= 15.90
STANDHYD (5052)	Total Imp(%)= 74.00
ID= 1 DT= 5.0 min	Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.77	4.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	325.58	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	112.47
over (min)	5.00	15.00
Storage Coeff. (min)=	4.49 (ii)	12.78 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.23	0.08
PEAK FLOW (cms)=	3.96	0.76
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	42.28
TOTAL RAINFALL (mm)=	91.90	91.90

TOTALS

PEAK FLOW (cms)=	3.96	0.76	4.597 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	42.28	70.63
TOTAL RAINFALL (mm)=	91.90	91.90	91.90

0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100
69.13	79.02	0.1100
92.42	79.04	0.1100
98.70	80.89	0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100
266.11	81.68	0.1100
306.94	81.73	0.1100
331.74	81.55	0.1100 /0.0700
336.74	80.15	0.0700
346.34	81.64	0.0700 /0.0900
394.77	81.68	0.0900
431.64	81.44	0.0900
477.44	82.08	0.0900
481.25	82.81	0.0900
501.51	83.16	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41
0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0114)	237.60	18.10	3.00	49.54	1.04	0.65
OUTFLOW : ID= 1 (0505)	237.60	17.34	3.08	49.54	1.01	0.64

RUNOFF COEFFICIENT = 0.93 0.46 0.77

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0505):	237.60	17.337	3.08	49.54
+ ID2= 2 (5052):	15.90	4.597	3.00	70.63
ID = 3 (0108):	253.50	20.289	3.00	50.86

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)	Routing time step (min)'= 5.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900
45.97	80.05	0.0900
65.23	79.93	0.0900
84.49	80.35	0.0900
113.49	80.02	0.0900
136.48	80.07	0.0900
188.81	79.81	0.0900
197.86	79.25	0.0900 /0.0700
200.70	78.22	0.0700
203.29	79.35	0.0700 /0.0900
204.01	79.67	0.0900
236.47	80.40	0.0900
277.80	80.48	0.0900
305.35	80.37	0.0900
346.67	80.41	0.0900
387.99	80.33	0.0900
415.54	80.53	0.0900
447.88	80.49	0.0900

<----- TRAVEL TIME TABLE ----->						
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME	
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)	
0.11	78.34	.979E+01	0.0	0.23	21.53	
0.23	78.45	.392E+02	0.0	0.37	13.56	
0.34	78.56	.881E+02	0.1	0.48	10.35	
0.46	78.68	.157E+03	0.3	0.58	8.54	
0.57	78.79	.245E+03	0.6	0.67	7.36	
0.68	78.91	.352E+03	0.9	0.76	6.52	
0.80	79.02	.480E+03	1.4	0.84	5.88	
0.91	79.13	.627E+03	1.9	0.92	5.38	
1.03	79.25	.793E+03	2.7	0.99	4.98	
1.15	79.37	.103E+04	3.8	1.09	4.55	
1.28	79.50	.135E+04	5.2	1.16	4.28	
1.40	79.62	.175E+04	7.1	1.20	4.12	
1.52	79.75	.228E+04	9.3	1.21	4.08	
1.65	79.87	.318E+04	11.7	1.10	4.52	
1.77	80.00	.524E+04	15.8	0.90	5.52	
1.90	80.12	.973E+04	24.3	0.74	6.69	
2.02	80.24	.158E+05	39.7	0.75	6.62	
2.15	80.37	.230E+05	59.2	0.77	6.46	
2.27	80.49	.349E+05	90.3	0.77	6.44	
<---- hydrograph ----> <-pipe / channel->						
AREA		QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)		(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0108)	253.50	20.29	3.00	50.86	1.84	0.81
OUTFLOW: ID= 1 (0506)	253.50	17.99	3.17	50.86	1.81	0.85

CALIB	Area (ha)= 11.70	
STANDHYD (5062)	Total Imp(%)= 75.00	Dir. Conn.(%)= 65.00
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.78	2.92
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	279.28	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr

0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	127.79
over (min)	5.00	15.00
Storage Coeff. (min)=	4.10 (ii)	11.97 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.09

PEAK FLOW (cms)=	2.94	0.63	*TOTALS*
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	46.34	72.05
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT	0.93	0.50	0.78

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0506):	253.50	17.993	3.17	50.86
+ ID2= 2 (5062):	11.70	3.475	3.00	72.05
ID = 3 (0110):	265.20	19.243	3.17	51.80

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	Area (ha)= 1.70	
STANDHYD (5102)	Total Imp(%)= 64.00	Dir. Conn.(%)= 52.00
ID= 1 DT= 5.0 min		

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	1.09	0.61
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	106.46	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	105.71	
over (min)	5.00	15.00	
Storage Coeff. (min)=	2.30 (ii)	10.79 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.30	0.09	
			TOTALS
PEAK FLOW (cms)=	0.35	0.11	0.445 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	40.09	63.91
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.44	0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)	Routing time step (min)'= 5.00
IN= 2----> OUT= 1	

<----- DATA FOR SECTION (553.6) ----->				
Distance	Elevation	Manning		
0.00	81.24	0.1100		
33.01	80.98	0.1100		
49.97	81.27	0.1100		
54.18	80.35	0.1100		
60.88	81.23	0.1100 / 0.0700	Main Channel	
69.13	79.02	0.0700	Main Channel	
92.42	79.04	0.0700	Main Channel	
98.70	80.89	0.0700 / 0.1100	Main Channel	
128.88	81.13	0.1100		
199.00	81.23	0.1100		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.12	79.13	.361E+03	0.6	0.24	9.91
0.23	79.25	.776E+03	2.1	0.40	6.09
0.35	79.37	.121E+04	4.3	0.52	4.65
0.47	79.48	.165E+04	7.1	0.63	3.85
0.59	79.60	.211E+04	10.5	0.72	3.34
0.70	79.72	.258E+04	14.4	0.81	2.98
0.82	79.84	.307E+04	18.8	0.89	2.71
0.94	79.95	.357E+04	23.8	0.97	2.50
1.05	80.07	.408E+04	29.2	1.04	2.33
1.17	80.19	.461E+04	35.1	1.10	2.19
1.29	80.30	.515E+04	41.5	1.17	2.07
1.41	80.42	.571E+04	48.4	1.23	1.97
1.52	80.54	.631E+04	55.8	1.28	1.88
1.64	80.66	.695E+04	63.8	1.33	1.81
1.76	80.77	.762E+04	72.3	1.38	1.76
1.87	80.89	.833E+04	81.4	1.42	1.71
2.00	81.02	.931E+04	92.4	1.44	1.68
2.13	81.14	.109E+05	104.8	1.39	1.74
2.25	81.27	.140E+05	120.9	1.25	1.93

----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5102) 1.70 0.45 3.00 63.91 0.09 0.24
OUTFLOW: ID= 1 (0511) 1.70 0.32 3.00 63.89 0.06 0.24

CALIB
STANDHYD (5112) Area (ha)= 3.00
ID= 1 DT= 5.0 min Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 121.62
over (min) 5.00 15.00
Storage Coeff. (min)= 2.72 (ii) 10.76 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00

0.26 79.98 .102E+03 0.0 0.23 34.47
0.40 80.11 .229E+03 0.1 0.30 26.30
0.53 80.24 .408E+03 0.3 0.36 21.71
0.66 80.37 .637E+03 0.6 0.42 18.71
0.79 80.51 .934E+03 0.9 0.46 16.84
0.93 80.64 .245E+04 1.6 0.31 24.96
1.06 80.77 .873E+04 4.6 0.25 31.51
1.19 80.90 .179E+05 11.4 0.30 26.08
1.32 81.04 .278E+05 22.6 0.38 20.45
1.46 81.17 .381E+05 37.5 0.46 16.91
1.60 81.31 .484E+05 55.4 0.54 14.57
1.74 81.45 .588E+05 76.0 0.61 12.90
1.87 81.59 .693E+05 99.3 0.67 11.63
2.01 81.72 .798E+05 125.0 0.73 10.64
2.15 81.86 .903E+05 153.1 0.80 9.83
2.29 82.00 .101E+06 183.5 0.85 9.16
2.42 82.14 .112E+06 214.3 0.90 8.68
2.56 82.27 .123E+06 244.4 0.93 8.40

----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0117) 4.70 1.18 3.00 67.11 0.84 0.40
OUTFLOW: ID= 1 (0512) 4.70 0.73 3.00 67.04 0.72 0.44

CALIB
STANDHYD (5122) Area (ha)= 3.90
ID= 1 DT= 5.0 min Total Imp(%)= 68.00 Dir. Conn.(%)= 57.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.65 1.25
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 161.25 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51

Unit Hyd. peak (cms)= 0.29 0.09
PEAK FLOW (cms)= 0.69 0.20 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 0.856 (iii)
RUNOFF VOLUME (mm)= 85.90 45.49 68.93
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.75

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0511): 1.70 0.322 3.00 63.89
+ ID2= 2 (5112): 3.00 0.856 3.00 68.93
ID = 3 (0117): 4.70 1.179 3.00 67.11

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)
IN= 2----> OUT= 1 Routing time step (min)'= 5.00

----- DATA FOR SECTION (484.2) ----->
Distance Elevation Manning
0.00 80.80 0.0900
9.73 80.46 0.0900
14.10 82.04 0.0900
17.18 82.28 0.0900
41.13 82.12 0.0900 / 0.0700 Main Channel
46.88 79.71 0.0700 Main Channel
51.41 80.90 0.0700 / 0.0900 Main Channel
94.29 80.56 0.0900
175.64 80.72 0.0900
192.09 80.85 0.0900

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 79.84 .255E+02 0.0 0.14 54.71

0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 120.11
over (min) 5.00 15.00
Storage Coeff. (min)= 2.95 (ii) 11.02 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.28 0.09

PEAK FLOW (cms)= 0.88 0.26 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.08 1.097 (iii)
RUNOFF VOLUME (mm)= 85.90 45.28 68.43
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.49 0.74

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)
1 + 2 = 3 AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0512): 4.70 0.726 3.00 67.04
+ ID2= 2 (5122): 3.90 1.097 3.00 68.43
ID = 3 (0119): 8.60 1.756 3.00 67.67

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0120)|
1 + 2 = 3
ID1= 1 (0110): 265.20 19.243 3.17 51.80
+ ID2= 2 (0119): 8.60 1.756 3.00 67.67
=====

ID = 3 (0120): 273.80 20.337 3.17 52.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (6011)| Area (ha)= 44.10 Curve Number (CN)= 62.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.83

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 9.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 9.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 9.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 9.19 6.00 3.68

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 1.596 (i)
TIME TO PEAK (hrs)= 3.833
RUNOFF VOLUME (mm)= 29.382
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (6012)| Area (ha)= 11.00
| ID= 1 DT= 5.0 min | Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

IMPERVIOUS (i)
Surface Area (ha)= 3.08 7.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.80 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 11.03 4.250 9.19 5.75 3.68
1.333 5.51 2.833 11.03 4.333 9.19 5.83 3.68
1.417 5.51 2.917 11.03 4.417 9.19 5.92 3.68
1.500 5.51 3.000 11.03 4.500 9.19 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 76.68
over (min)= 5.00 15.00
Storage Coeff. (min)= 4.02 (ii) 13.68 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

TOTALS

PEAK FLOW (cms)= 0.68 0.94 1.451 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 33.10 41.55
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.36 0.45

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0124)|
1 + 2 = 3
ID1= 1 (6011): 44.10 1.596 3.83 29.38
+ ID2= 2 (6012): 11.00 1.451 3.00 41.55
=====

ID = 3 (0124): 55.10 1.931 3.50 31.81

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| CALIB
| NASHYD (6021)| Area (ha)= 43.60 Curve Number (CN)= 62.0
| ID= 1 DT= 5.0 min | Ia (mm)= 8.00 # of Linear Res.(N)= 3.00

U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68

1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 1.426 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 29.382
TOTAL RAINFALL (mm)= 91.900
RUNOFF COEFFICIENT = 0.320

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| CALIB
| STANDHYD (6022)| Area (ha)= 12.90
| ID= 1 DT= 5.0 min | Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN ' TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 11.03 4.083 9.19 5.58 3.68
1.167 5.51 2.667 11.03 4.167 9.19 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68

1.417 5.51 | 2.917 143.36 | 4.417 7.35 | 5.92 3.68
1.500 5.51 | 3.000 143.36 | 4.500 7.35 | 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 78.70
over (min) 5.00 15.00
Storage Coeff. (min)= 4.22 (ii) 13.78 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.24 0.08

PEAK FLOW (cms)= 1.14 1.02 *TOTALS*
TIME TO PEAK (hrs)= 3.00 3.00 1.979 (iii)
RUNOFF VOLUME (mm)= 85.90 33.48 45.53
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.36 0.50

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3

ID1= 1 (6021): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
43.60 1.426 4.00 29.38
+ ID2= 2 (6022): 12.90 1.979 3.00 45.53
=====

ID = 3 (0125): 56.50 2.259 3.00 33.07

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)
1 + 2 = 3

ID1= 1 (0124): AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
55.10 1.931 3.50 31.81
+ ID2= 2 (0125): 56.50 2.259 3.00 33.07
=====

ID = 3 (0126): 111.60 4.090 3.00 32.45

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0603)

| IN= 2---> OUT= 1 | Routing time step (min)'= 5.00

----- DATA FOR SECTION (2135.9) ----->
Distance Elevation Manning
0.00 92.58 0.1400
8.54 92.59 0.1400
22.11 92.47 0.1400
48.74 91.83 0.1400
67.59 91.58 0.1400
86.45 91.21 0.1400
103.50 90.80 0.1400
118.09 90.23 0.1400
127.84 90.09 0.1400 /0.0700 Main Channel
129.84 89.59 0.0700 Main Channel
130.34 90.09 0.0700 /0.1400 Main Channel
140.57 90.14 0.1400
161.87 90.11 0.1400
177.03 90.04 0.1400
188.67 89.87 0.1400
199.59 90.31 0.1400
212.02 90.96 0.1400
225.58 91.35 0.1400
252.71 91.66 0.1400
274.11 91.86 0.1400

----- TRAVEL TIME TABLE ----->
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV. TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 89.71 .358E+02 0.0 0.19 81.29
0.25 89.84 .143E+03 0.0 0.30 51.21
0.37 89.96 .689E+03 0.2 0.23 67.44
0.50 90.09 .278E+04 0.6 0.20 77.83
0.67 90.26 .132E+05 3.4 0.23 65.31
0.83 90.42 .262E+05 9.3 0.33 46.76
1.00 90.59 .403E+05 17.9 0.41 37.64
1.17 90.76 .556E+05 28.8 0.48 32.17
1.33 90.92 .721E+05 42.0 0.53 28.63
1.50 91.09 .903E+05 57.1 0.58 26.37
1.67 91.26 .110E+06 74.7 0.62 24.65
1.83 91.42 .133E+06 93.4 0.64 23.71
2.00 91.59 .159E+06 113.6 0.66 23.26
2.17 91.76 .188E+06 136.6 0.67 22.96
2.33 91.92 .222E+06 168.5 0.70 21.97
2.50 92.09 .258E+06 211.3 0.75 20.33
2.67 92.26 .294E+06 258.5 0.81 18.98
2.83 92.42 .332E+06 310.1 0.86 17.85
3.00 92.59 .371E+06 358.0 0.88 17.29

----- hydrograph -----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0126) 111.60 4.09 3.00 32.45 0.69 0.24
OUTFLOW: ID= 1 (0603) 111.60 2.68 4.50 32.44 0.62 0.22

CALIB
STANDHYD (6032) Area (ha)= 34.60
ID= 1 DT= 5.0 min Total Imp(%)= 47.00 Dir. Conn.(%)= 32.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 16.26 18.34
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 480.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH ----->
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 114.52
over (min) 5.00 15.00
Storage Coeff. (min)= 5.67 (ii) 13.90 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.20 0.08

TOTALS

PEAK FLOW (cms)= 4.13 3.31 6.910 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 90.40 45.12 59.61
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.98 0.49 0.65

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6102) Area (ha)= 21.10
ID= 1 DT= 5.0 min Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 10.55 10.55
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 375.06 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH ----->
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 3.68 1.583 9.19 3.083 20.22 4.58 5.51
0.167 3.68 1.667 9.19 3.167 20.22 4.67 5.51
0.250 3.68 1.750 9.19 3.250 20.22 4.75 5.51
0.333 3.68 1.833 9.19 3.333 20.22 4.83 5.51
0.417 3.68 1.917 9.19 3.417 20.22 4.92 5.51
0.500 3.68 2.000 9.19 3.500 20.22 5.00 5.51
0.583 5.51 2.083 11.03 3.583 9.19 5.08 3.68
0.667 5.51 2.167 11.03 3.667 9.19 5.17 3.68
0.750 5.51 2.250 11.03 3.750 9.19 5.25 3.68
0.833 5.51 2.333 11.03 3.833 9.19 5.33 3.68
0.917 5.51 2.417 11.03 3.917 9.19 5.42 3.68
1.000 5.51 2.500 11.03 4.000 9.19 5.50 3.68
1.083 5.51 2.583 55.14 4.083 7.35 5.58 3.68
1.167 5.51 2.667 55.14 4.167 7.35 5.67 3.68
1.250 5.51 2.750 99.25 4.250 7.35 5.75 3.68
1.333 5.51 2.833 99.25 4.333 7.35 5.83 3.68
1.417 5.51 2.917 143.36 4.417 7.35 5.92 3.68
1.500 5.51 3.000 143.36 4.500 7.35 6.00 3.68

Max.Eff.Inten.(mm/hr)= 143.36 111.58
over (min) 5.00 15.00
Storage Coeff. (min)= 4.89 (ii) 13.21 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.22 0.08

PEAK FLOW (cms)= 2.81 1.89 4.394 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 90.40 43.38 59.84
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.98 0.47 0.65

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)
1 + 2 = 3

ID1= 1 (0603): 111.60 2.684 4.50 32.44
+ ID2= 2 (6032): 34.60 6.910 3.00 59.61
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0128)
3 + 2 = 1

ID1= 3 (0128): 146.20 7.642 3.00 38.87
+ ID2= 2 (6102): 21.10 4.394 3.00 59.84
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0604)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 /0.0700
166.55	83.78	0.0700
168.05	84.78	0.0700 /0.1100
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11
0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel-->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.30	12.04	3.00	41.52	2.77	0.08

OUTFLOW: ID= 1 (0604) 167.30 4.08 3.08 41.50 2.23 0.09

***** WARNING: COMPUTATIONS FAILED TO CONVERGE.

CALIB
STANDHYD (6042)
ID= 1 DT= 5.0 min

Area (ha)= 24.00
Total Imp(%)= 78.00 Dir. Conn.(%)= 69.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 18.72 5.28
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 400.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

TIME		RAIN		TIME		RAIN	
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 152.35
over (min) 5.00 10.00
Storage Coeff. (min)= 5.08 (ii) 9.84 (ii)
Unit Hyd. Tpeak (min)= 5.00 10.00
Unit Hyd. peak (cms)= 0.21 0.11

PEAK FLOW (cms)= 6.27 1.57 7.836 (iii)

TIME TO PEAK (hrs)= 3.00 3.00 3.00
RUNOFF VOLUME (mm)= 85.90 55.42 76.45
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.60 0.83

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0130)
1 + 2 = 3

ID1= 1 (0604): 167.30 4.076 3.08 41.50
+ ID2= 2 (6042): 24.00 7.836 3.00 76.45
=====

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0605)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (801.4) ----->

Distance	Elevation	Manning
0.00	82.95	0.1100
3.78	82.95	0.1100
9.24	82.49	0.1100
50.67	82.10	0.1100
105.12	82.17	0.1100
119.34	81.56	0.1100
150.67	81.66	0.1100
157.23	82.37	0.1100
190.03	82.57	0.1100
223.75	82.27	0.1100
252.32	82.50	0.1100
254.65	81.95	0.1100 /0.0700
258.15	80.95	0.0700
259.65	81.95	0.0700 /0.1100
263.15	82.90	0.1100
278.14	82.80	0.1100
282.35	81.68	0.1100
285.02	82.19	0.1100
336.56	82.53	0.1100

404.40		82.68		0.1100	
<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.08	81.03	.125E+02	0.0	0.11	104.30
0.17	81.12	.499E+02	0.0	0.18	65.70
0.25	81.20	.112E+03	0.0	0.24	50.14
0.33	81.28	.199E+03	0.1	0.29	41.39
0.42	81.37	.312E+03	0.1	0.34	35.67
0.50	81.45	.449E+03	0.2	0.38	31.59
0.58	81.53	.611E+03	0.4	0.42	28.50
0.67	81.62	.117E+04	0.5	0.33	36.11
0.75	81.70	.316E+04	1.1	0.24	49.12
0.83	81.78	.560E+04	2.1	0.27	45.15
0.92	81.87	.827E+04	3.4	0.30	40.03
1.00	81.95	.112E+05	5.2	0.33	35.88
1.10	82.05	.151E+05	8.0	0.38	31.68
1.21	82.16	.207E+05	8.8	0.30	39.37
1.31	82.26	.306E+05	14.0	0.33	36.36
1.41	82.36	.433E+05	20.3	0.34	35.59
1.52	82.47	.606E+05	28.4	0.34	35.57
1.62	82.57	.828E+05	41.0	0.36	33.68
1.73	82.68	.109E+06	60.1	0.39	30.35
<---- hydrograph ----> <-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m) (m/s)
INFLOW : ID= 2 (0130)	191.30	11.57	3.00	45.89	1.26 0.32
OUTFLOW: ID= 1 (0065)	191.30	5.60	3.25	45.88	1.01 0.34

CALIB	
STANDHYD (6112)	Area (ha)= 11.40
ID= 1 DT= 5.0 min	Total Imp(%)= 72.00 Dir. Conn.(%)= 62.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	8.21	3.19
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	275.68	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	133.09
over (min)	5.00	15.00
Storage Coeff. (min)=	4.06 (ii)	11.81 (ii)
Unit Hyd. Tpeak (min)=	5.00	15.00
Unit Hyd. peak (cms)=	0.24	0.09
		TOTALS
PEAK FLOW (cms)=	2.73	0.73
TIME TO PEAK (hrs)=	3.00	3.08
RUNOFF VOLUME (mm)=	85.90	49.85
TOTAL RAINFALL (mm)=	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.54
		0.79

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0065):	191.30	5.601	3.25	45.88	
+ ID2= 2 (6112):	11.40	3.355	3.00	72.20	
=====					

ID = 3 (0139): 202.70 7.302 3.00 47.36

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB	
STANDHYD (6052)	Area (ha)= 15.90
ID= 1 DT= 5.0 min	Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	11.77	4.13
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	325.58	40.00
Mannings n	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68
Max.Eff.Inten.(mm/hr)=	143.36	107.34					
over (min)	5.00	15.00					
Storage Coeff. (min)=	4.49 (ii)	12.94 (ii)					
Unit Hyd. Tpeak (min)=	5.00	15.00					
Unit Hyd. peak (cms)=	0.23	0.08					
							TOTALS
PEAK FLOW (cms)=	3.96	0.72	4.560 (iii)				
TIME TO PEAK (hrs)=	3.00	3.08	3.00				
RUNOFF VOLUME (mm)=	85.90	40.34	69.95				

TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.44	0.76

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)		AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3		(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0139):	202.70	7.302	3.00	47.36	
+ ID2= 2 (6052):	15.90	4.560	3.00	69.95	
=====					
ID = 3 (0132):	218.60	11.863	3.00	49.01	

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)	
IN= 2----> OUT= 1	Routing time step (min)'= 5.00

<----- DATA FOR SECTION (350.0) ----->			
Distance	Elevation	Manning	
0.00	81.70	0.1100	
3.84	81.72	0.1100	
5.87	80.72	0.1100	
9.38	81.42	0.1100	
49.64	81.07	0.1100	
80.61	80.72	0.1100	
85.61	81.14	0.1100	
93.32	80.00	0.1100	
95.04	80.45	0.1100	
102.72	80.66	0.1100	
110.13	78.93	0.1100 /0.0700	Main Channel
118.05	78.63	0.0700	Main Channel
124.40	78.89	0.0700 /0.1100	Main Channel
132.18	79.61	0.1100	
139.34	79.23	0.1100	
144.67	79.43	0.1100	
149.63	79.98	0.1100	
153.42	79.79	0.1100	
158.56	80.58	0.1100	
176.89	81.15	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	78.76	.190E+03	0.1	0.19	38.41
0.26	78.89	.758E+03	0.5	0.31	24.20
0.43	79.05	.189E+04	2.1	0.50	14.77
0.59	79.22	.321E+04	4.7	0.65	11.35
0.76	79.39	.498E+04	8.2	0.73	10.10
0.93	79.55	.743E+04	13.1	0.78	9.48
1.09	79.72	.103E+05	19.5	0.84	8.84
1.26	79.89	.135E+05	27.1	0.89	8.29
1.43	80.05	.171E+05	36.3	0.94	7.85
1.59	80.22	.209E+05	47.2	1.00	7.39
1.76	80.39	.251E+05	59.8	1.06	6.99
1.93	80.56	.296E+05	73.5	1.10	6.70
2.10	80.72	.348E+05	87.6	1.12	6.61
2.26	80.89	.412E+05	102.8	1.11	6.68
2.43	81.06	.495E+05	122.0	1.09	6.77
2.60	81.22	.596E+05	146.2	1.09	6.80
2.76	81.39	.714E+05	176.9	1.10	6.72
2.93	81.56	.841E+05	215.0	1.13	6.52
3.10	81.72	.970E+05	256.7	1.18	6.30
<----- hydrograph ----->					
AREA		QPEAK	TPEAK	R.V.	<-pipe / channel->
(ha)		(cms)	(hrs)	(mm)	MAX DEPTH MAX VEL
					(m) (m/s)
INFLOW : ID= 2	(0132)	218.60	11.86	3.00	49.01 0.89 0.77
OUTFLOW: ID= 1	(0530)	218.60	9.42	3.08	49.01 0.80 0.74

CALIB	
STANDHYD (5302)	
ID= 1 DT= 5.0 min	

Area (ha)=	5.80
Total Imp(%)=	66.00
Dir. Conn.(%)=	56.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	3.83	1.97	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	196.64	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN

hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)=	143.36	100.77	
over (min)	5.00	15.00	
Storage Coeff. (min)=	3.32 (ii)	11.98 (ii)	
Unit Hyd. Tpeak (min)=	5.00	15.00	
Unit Hyd. peak (cms)=	0.26	0.09	
			TOTALS
PEAK FLOW (cms)=	1.27	0.33	1.549 (iii)
TIME TO PEAK (hrs)=	3.00	3.08	3.00
RUNOFF VOLUME (mm)=	85.90	39.33	65.41
TOTAL RAINFALL (mm)=	91.90	91.90	91.90
RUNOFF COEFFICIENT =	0.93	0.43	0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)				
1 + 2 = 3				
ID1= 1 (0530):	218.60	9.415	3.08	49.01
+ ID2= 2 (5302):	5.80	1.549	3.00	65.41
ID = 3 (0134):	224.40	10.205	3.00	49.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)				
1 + 2 = 3				
ID1= 1 (0120):	273.80	20.337	3.17	52.29
+ ID2= 2 (0134):	224.40	10.205	3.00	49.43
ID = 3 (0135):	498.20	30.261	3.08	51.00

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)	
IN= 2---> OUT= 1	

Routing time step (min)'=	5.00

----- DATA FOR SECTION (40.0) -----			
Distance	Elevation	Manning	
0.00	79.36	0.0900	
7.45	79.32	0.0900	
13.77	79.27	0.0900	
20.24	79.24	0.0900	
27.28	79.26	0.0900	
34.16	79.13	0.0900	
40.79	79.05	0.0900	
47.58	79.05	0.0900	
54.30	79.07	0.0900	
60.87	79.24	0.0900	
71.39	79.48	0.0900	
73.53	78.96	0.0900	
76.96	78.07	0.0900	
82.21	77.08	0.0900 / 0.0700	Main Channel
85.82	76.28	0.0700	Main Channel
89.97	76.89	0.0700	Main Channel
91.35	77.38	0.0700 / 0.0900	Main Channel
95.27	78.68	0.0900	
98.44	79.63	0.0900	
102.89	79.89	0.0900	

----- TRAVEL TIME TABLE -----					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.16	76.44	.113E+03	0.0	0.14	88.10
0.32	76.60	.451E+03	0.1	0.23	55.50
0.49	76.76	.101E+04	0.4	0.30	42.35
0.65	76.92	.180E+04	0.9	0.37	34.57
0.81	77.09	.276E+04	1.6	0.44	28.86

0.97	77.25	.388E+04	2.7	0.52	24.37
1.14	77.41	.516E+04	4.0	0.59	21.56
1.30	77.57	.660E+04	5.7	0.66	19.26
1.46	77.74	.822E+04	7.8	0.72	17.67
1.62	77.90	.100E+05	10.1	0.77	16.48
1.79	78.06	.120E+05	12.8	0.82	15.54
1.95	78.22	.141E+05	15.9	0.87	14.74
2.11	78.39	.163E+05	19.4	0.91	14.06
2.27	78.55	.187E+05	23.2	0.95	13.47
2.44	78.71	.212E+05	27.3	0.99	12.95
2.60	78.87	.239E+05	31.9	1.02	12.50
2.76	79.04	.267E+05	36.8	1.06	12.10
2.92	79.20	.320E+05	39.4	0.94	13.56
3.09	79.36	.409E+05	45.7	0.85	14.94

<---- hydrograph <---->					<-pipe / channel->	
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0135)	498.20	30.26	3.08	51.00	2.54	1.01
OUTFLOW: ID= 1 (0507)	498.20	26.69	3.33	51.00	2.40	0.98

CALIB	
STANDHYD (5072)	
ID= 1 DT= 5.0 min	

Area (ha)=	48.90
Total Imp(%)=	50.00
Dir. Conn.(%)=	36.00

IMPERVIOUS		PERVIOUS (i)	
Surface Area (ha)=	24.45	24.45	
Dep. Storage (mm)=	6.00	8.00	
Average Slope (%)=	1.00	1.00	
Length (m)=	570.96	40.00	
Mannings n =	0.013	0.250	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68

0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 119.44
over (min) 5.00 15.00
Storage Coeff. (min)= 6.29 (ii) 14.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.19 0.08

TOTALS
PEAK FLOW (cms)= 6.46 4.56 10.299 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 47.22 61.14
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.51 0.67

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0507):	498.20	26.689	3.33	51.00
+ ID2= 2 (5072):	48.90	10.299	3.00	61.14
=====				
ID = 3 (0122):	547.10	32.039	3.17	51.91

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
STANDHYD (5402)			
ID= 1 DT= 5.0 min			
	Area (ha)=	9.40	
	Total Imp(%)=	50.00	Dir. Conn.(%)= 35.00
	IMPERVIOUS	PERVIOUS (i)	
Surface Area (ha)=	4.70	4.70	

Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 250.33 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	3.68	1.583	9.19	3.083	20.22	4.58	5.51
0.167	3.68	1.667	9.19	3.167	20.22	4.67	5.51
0.250	3.68	1.750	9.19	3.250	20.22	4.75	5.51
0.333	3.68	1.833	9.19	3.333	20.22	4.83	5.51
0.417	3.68	1.917	9.19	3.417	20.22	4.92	5.51
0.500	3.68	2.000	9.19	3.500	20.22	5.00	5.51
0.583	5.51	2.083	11.03	3.583	9.19	5.08	3.68
0.667	5.51	2.167	11.03	3.667	9.19	5.17	3.68
0.750	5.51	2.250	11.03	3.750	9.19	5.25	3.68
0.833	5.51	2.333	11.03	3.833	9.19	5.33	3.68
0.917	5.51	2.417	11.03	3.917	9.19	5.42	3.68
1.000	5.51	2.500	11.03	4.000	9.19	5.50	3.68
1.083	5.51	2.583	55.14	4.083	7.35	5.58	3.68
1.167	5.51	2.667	55.14	4.167	7.35	5.67	3.68
1.250	5.51	2.750	99.25	4.250	7.35	5.75	3.68
1.333	5.51	2.833	99.25	4.333	7.35	5.83	3.68
1.417	5.51	2.917	143.36	4.417	7.35	5.92	3.68
1.500	5.51	3.000	143.36	4.500	7.35	6.00	3.68

Max.Eff.Inten.(mm/hr)= 143.36 101.50
over (min) 5.00 15.00
Storage Coeff. (min)= 3.84 (ii) 12.47 (ii)
Unit Hyd. Tpeak (min)= 5.00 15.00
Unit Hyd. peak (cms)= 0.25 0.08
TOTALS
PEAK FLOW (cms)= 1.28 0.78 1.929 (iii)
TIME TO PEAK (hrs)= 3.00 3.08 3.00
RUNOFF VOLUME (mm)= 85.90 39.44 55.70
TOTAL RAINFALL (mm)= 91.90 91.90 91.90
RUNOFF COEFFICIENT = 0.93 0.43 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD (1505)		AREA	(ha)=	30.00
ID= 1 DT= 5.0min		QPEAK	(cms)=	0.78
		TPEAK	(hrs)=	15.58
		VOLUME	(mm)=	402.14

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17
1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18

3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18
5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17

24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11
26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10

28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.27	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.28	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10
30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

STORE HYD(1605)	AREA	(ha)=	30.00
ID= 1 DT= 5.0min	QPEAK	(cms)=	1.37
	TPEAK	(hrs)=	71.92
	VOLUME	(mm)=	625.27

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20

0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25
3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28

8.83	0.00	40.08	0.20	71.33	1.32	102.58	0.27	133.83	0.25
8.92	0.00	40.17	0.21	71.42	1.33	102.67	0.27	133.92	0.25
9.00	0.00	40.25	0.21	71.50	1.34	102.75	0.27	134.00	0.25
9.08	0.00	40.33	0.21	71.58	1.36	102.83	0.27	134.08	0.25
9.17	0.00	40.42	0.22	71.67	1.36	102.92	0.27	134.17	0.25
9.25	0.00	40.50	0.22	71.75	1.36	103.00	0.27	134.25	0.25
9.33	0.00	40.58	0.22	71.83	1.37	103.08	0.27	134.33	0.25
9.42	0.00	40.67	0.23	71.92	1.37	103.17	0.27	134.42	0.25
9.50	0.00	40.75	0.23	72.00	1.36	103.25	0.26	134.50	0.25
9.58	0.00	40.83	0.24	72.08	1.35	103.33	0.26	134.58	0.24
9.67	0.00	40.92	0.24	72.17	1.35	103.42	0.26	134.67	0.24
9.75	0.00	41.00	0.24	72.25	1.33	103.50	0.26	134.75	0.24
9.83	0.00	41.08	0.25	72.33	1.32	103.58	0.26	134.83	0.24
9.92	0.00	41.17	0.25	72.42	1.31	103.67	0.26	134.92	0.24
10.00	0.00	41.25	0.26	72.50	1.29	103.75	0.25	135.00	0.24
10.08	0.00	41.33	0.27	72.58	1.27	103.83	0.25	135.08	0.24
10.17	0.00	41.42	0.27	72.67	1.26	103.92	0.25	135.17	0.24
10.25	0.00	41.50	0.28	72.75	1.23	104.00	0.25	135.25	0.24
10.33	0.00	41.58	0.29	72.83	1.23	104.08	0.25	135.33	0.23
10.42	0.00	41.67	0.29	72.92	1.21	104.17	0.25	135.42	0.23
10.50	0.00	41.75	0.30	73.00	1.20	104.25	0.25	135.50	0.23
10.58	0.00	41.83	0.30	73.08	1.17	104.33	0.25	135.58	0.23
10.67	0.00	41.92	0.31	73.17	1.17	104.42	0.24	135.67	0.23
10.75	0.00	42.00	0.32	73.25	1.16	104.50	0.24	135.75	0.23
10.83	0.00	42.08	0.32	73.33	1.15	104.58	0.24	135.83	0.23
10.92	0.00	42.17	0.33	73.42	1.12	104.67	0.24	135.92	0.23
11.00	0.00	42.25	0.33	73.50	1.12	104.75	0.24	136.00	0.22
11.08	0.00	42.33	0.34	73.58	1.11	104.83	0.24	136.08	0.22
11.17	0.00	42.42	0.34	73.67	1.09	104.92	0.24	136.17	0.22
11.25	0.00	42.50	0.35	73.75	1.08	105.00	0.24	136.25	0.22
11.33	0.00	42.58	0.36	73.83	1.06	105.08	0.24	136.33	0.22
11.42	0.00	42.67	0.36	73.92	1.05	105.17	0.23	136.42	0.22
11.50	0.00	42.75	0.37	74.00	1.03	105.25	0.23	136.50	0.22
11.58	0.00	42.83	0.38	74.08	1.03	105.33	0.23	136.58	0.22
11.67	0.00	42.92	0.39	74.17	1.02	105.42	0.23	136.67	0.21
11.75	0.00	43.00	0.40	74.25	1.00	105.50	0.23	136.75	0.21
11.83	0.00	43.08	0.40	74.33	0.99	105.58	0.23	136.83	0.21
11.92	0.00	43.17	0.42	74.42	0.97	105.67	0.23	136.92	0.21
12.00	0.00	43.25	0.42	74.50	0.96	105.75	0.23	137.00	0.21
12.08	0.00	43.33	0.43	74.58	0.95	105.83	0.23	137.08	0.21
12.17	0.00	43.42	0.44	74.67	0.94	105.92	0.23	137.17	0.21
12.25	0.00	43.50	0.45	74.75	0.92	106.00	0.22	137.25	0.21
12.33	0.00	43.58	0.46	74.83	0.91	106.08	0.22	137.33	0.21
12.42	0.00	43.67	0.47	74.92	0.89	106.17	0.22	137.42	0.21
12.50	0.00	43.75	0.48	75.00	0.88	106.25	0.22	137.50	0.20
12.58	0.00	43.83	0.49	75.08	0.87	106.33	0.22	137.58	0.20
12.67	0.00	43.92	0.50	75.17	0.85	106.42	0.22	137.67	0.20
12.75	0.00	44.00	0.50	75.25	0.84	106.50	0.22	137.75	0.20
12.83	0.00	44.08	0.51	75.33	0.83	106.58	0.22	137.83	0.20
12.92	0.00	44.17	0.51	75.42	0.81	106.67	0.22	137.92	0.20

13.00	0.00	44.25	0.52	75.50	0.80	106.75	0.21	138.00	0.20
13.08	0.00	44.33	0.52	75.58	0.79	106.83	0.21	138.08	0.20
13.17	0.00	44.42	0.53	75.67	0.77	106.92	0.21	138.17	0.20
13.25	0.00	44.50	0.53	75.75	0.77	107.00	0.21	138.25	0.19
13.33	0.00	44.58	0.53	75.83	0.76	107.08	0.21	138.33	0.19
13.42	0.00	44.67	0.54	75.92	0.74	107.17	0.21	138.42	0.19
13.50	0.00	44.75	0.54	76.00	0.74	107.25	0.21	138.50	0.19
13.58	0.00	44.83	0.54	76.08	0.72	107.33	0.21	138.58	0.19
13.67	0.00	44.92	0.55	76.17	0.72	107.42	0.21	138.67	0.19
13.75	0.00	45.00	0.55	76.25	0.71	107.50	0.21	138.75	0.19
13.83	0.00	45.08	0.55	76.33	0.70	107.58	0.21	138.83	0.19
13.92	0.00	45.17	0.55	76.42	0.69	107.67	0.21	138.92	0.19
14.00	0.00	45.25	0.55	76.50	0.68	107.75	0.20	139.00	0.19
14.08	0.00	45.33	0.55	76.58	0.68	107.83	0.20	139.08	0.19
14.17	0.00	45.42	0.55	76.67	0.68	107.92	0.20	139.17	0.18
14.25	0.00	45.50	0.55	76.75	0.66	108.00	0.20	139.25	0.18
14.33	0.00	45.58	0.55	76.83	0.65	108.08	0.20	139.33	0.18
14.42	0.00	45.67	0.55	76.92	0.65	108.17	0.20	139.42	0.18
14.50	0.00	45.75	0.55	77.00	0.64	108.25	0.20	139.50	0.18
14.58	0.00	45.83	0.55	77.08	0.63	108.33	0.20	139.58	0.18
14.67	0.00	45.92	0.55	77.17	0.63	108.42	0.20	139.67	0.18
14.75	0.99	46.00	0.54	77.25	0.63	108.50	0.20	139.75	0.18
14.83	0.99	46.08	0.54	77.33	0.62	108.58	0.20	139.83	0.18
14.92	1.00	46.17	0.54	77.42	0.61	108.67	0.20	139.92	0.18
15.00	1.00	46.25	0.54	77.50	0.60	108.75	0.19	140.00	0.18
15.08	1.01	46.33	0.53	77.58	0.60	108.83	0.19	140.08	0.18
15.17	1.01	46.42	0.53	77.67	0.59	108.92	0.19	140.17	0.18
15.25	1.02	46.50	0.53	77.75	0.59	109.00	0.19	140.25	0.18
15.33	1.03	46.58	0.52	77.83	0.58	109.08	0.19	140.33	0.18
15.42	1.04	46.67	0.52	77.92	0.58	109.17	0.19	140.42	0.17
15.50	1.05	46.75	0.52	78.00	0.58	109.25	0.19	140.50	0.17
15.58	1.06	46.83	0.52	78.08	0.58	109.33	0.19	140.58	0.17
15.67	1.07	46.92	0.51	78.17	0.57	109.42	0.19	140.67	0.17
15.75	1.08	47.00	0.51	78.25	0.56	109.50	0.19	140.75	0.17
15.83	1.08	47.08	0.51	78.33	0.56	109.58	0.19	140.83	0.17
15.92	1.08	47.17	0.51	78.42	0.55	109.67	0.18	140.92	0.17
16.00	1.09	47.25	0.51	78.50	0.55	109.75	0.18	141.00	0.17
16.08	1.09	47.33	0.51	78.58	0.55	109.83	0.18	141.08	0.17
16.17	1.09	47.42	0.51	78.67	0.55	109.92	0.18	141.17	0.17
16.25	1.09	47.50	0.50	78.75	0.54	110.00	0.18	141.25	0.17
16.33	1.09	47.58	0.50	78.83	0.54	110.08	0.18	141.33	0.17
16.42	1.09	47.67	0.50	78.92	0.54	110.17	0.18	141.42	0.17
16.50	1.09	47.75	0.50	79.00	0.54	110.25	0.18	141.50	0.16
16.58	1.10	47.83	0.50	79.08	0.53	110.33	0.18	141.58	0.16
16.67	1.09	47.92	0.50	79.17	0.52	110.42	0.18	141.67	0.16
16.75	1.09	48.00	0.50	79.25	0.52	110.50	0.18	141.75	0.16
16.83	1.08	48.08	0.50	79.33	0.51	110.58	0.18	141.83	0.16
16.92	1.09	48.17	0.49	79.42	0.50	110.67	0.18	141.92	0.16
17.00	1.08	48.25	0.49	79.50	0.50	110.75	0.18	142.00	0.16
17.08	1.07	48.33	0.49	79.58	0.49	110.83	0.18	142.08	0.16

17.17	1.06	48.42	0.49	79.67	0.49	110.92	0.18	142.17	0.16
17.25	1.06	48.50	0.49	79.75	0.48	111.00	0.18	142.25	0.16
17.33	1.05	48.58	0.49	79.83	0.48	111.08	0.18	142.33	0.16
17.42	1.04	48.67	0.48	79.92	0.48	111.17	0.18	142.42	0.16
17.50	1.04	48.75	0.48	80.00	0.47	111.25	0.18	142.50	0.16
17.58	1.03	48.83	0.48	80.08	0.47	111.33	0.18	142.58	0.16
17.67	1.02	48.92	0.48	80.17	0.46	111.42	0.18	142.67	0.16
17.75	1.01	49.00	0.47	80.25	0.46	111.50	0.18	142.75	0.16
17.83	1.00	49.08	0.47	80.33	0.46	111.58	0.18	142.83	0.16
17.92	0.99	49.17	0.47	80.42	0.45	111.67	0.18	142.92	0.16
18.00	0.98	49.25	0.47	80.50	0.45	111.75	0.18	143.00	0.16
18.08	0.97	49.33	0.47	80.58	0.45	111.83	0.17	143.08	0.15
18.17	0.96	49.42	0.46	80.67	0.45	111.92	0.17	143.17	0.15
18.25	0.95	49.50	0.46	80.75	0.44	112.00	0.17	143.25	0.15
18.33	0.93	49.58	0.46	80.83	0.44	112.08	0.17	143.33	0.15
18.42	0.92	49.67	0.46	80.92	0.44	112.17	0.17	143.42	0.15
18.50	0.91	49.75	0.45	81.00	0.44	112.25	0.17	143.50	0.15
18.58	0.89	49.83	0.45	81.08	0.44	112.33	0.17	143.58	0.15
18.67	0.87	49.92	0.45	81.17	0.44	112.42	0.17	143.67	0.15
18.75	0.86	50.00	0.45	81.25	0.44	112.50	0.17	143.75	0.15
18.83	0.84	50.08	0.44	81.33	0.44	112.58	0.17	143.83	0.15
18.92	0.83	50.17	0.44	81.42	0.43	112.67	0.17	143.92	0.15
19.00	0.81	50.25	0.44	81.50	0.44	112.75	0.17	144.00	0.15
19.08	0.79	50.33	0.44	81.58	0.45	112.83	0.17	144.08	0.15
19.17	0.78	50.42	0.44	81.67	0.46	112.92	0.17	144.17	0.15
19.25	0.76	50.50	0.44	81.75	0.45	113.00	0.17	144.25	0.15
19.33	0.74	50.58	0.44	81.83	0.46	113.08	0.17	144.33	0.15
19.42	0.72	50.67	0.44	81.92	0.46	113.17	0.16	144.42	0.15
19.50	0.71	50.75	0.43	82.00	0.47	113.25	0.16	144.50	0.15
19.58	0.69	50.83	0.43	82.08	0.47	113.33	0.16	144.58	0.15
19.67	0.68	50.92	0.43	82.17	0.47	113.42	0.16	144.67	0.15
19.75	0.66	51.00	0.43	82.25	0.48	113.50	0.16	144.75	0.15
19.83	0.65	51.08	0.43	82.33	0.49	113.58	0.16	144.83	0.14
19.92	0.64	51.17	0.43	82.42	0.49	113.67	0.16	144.92	0.14
20.00	0.62	51.25	0.43	82.50	0.49	113.75	0.16	145.00	0.14
20.08	0.61	51.33	0.43	82.58	0.49	113.83	0.16	145.08	0.14
20.17	0.60	51.42	0.43	82.67	0.50	113.92	0.16	145.17	0.14
20.25	0.58	51.50	0.43	82.75	0.50	114.00	0.16	145.25	0.14
20.33	0.58	51.58	0.43	82.83	0.50	114.08	0.16	145.33	0.14
20.42	0.56	51.67	0.43	82.92	0.50	114.17	0.16	145.42	0.14
20.50	0.55	51.75	0.43	83.00	0.50	114.25	0.16	145.50	0.14
20.58	0.54	51.83	0.43	83.08	0.50	114.33	0.16	145.58	0.14
20.67	0.53	51.92	0.43	83.17	0.51	114.42	0.16	145.67	0.14
20.75	0.52	52.00	0.43	83.25	0.51	114.50	0.16	145.75	0.14
20.83	0.51	52.08	0.43	83.33	0.51	114.58	0.16	145.83	0.14
20.92	0.50	52.17	0.43	83.42	0.51	114.67	0.16	145.92	0.14
21.00	0.49	52.25	0.43	83.50	0.52	114.75	0.16	146.00	0.14
21.08	0.49	52.33	0.43	83.58	0.52	114.83	0.16	146.08	0.14
21.17	0.48	52.42	0.43	83.67	0.53	114.92	0.16	146.17	0.14
21.25	0.47	52.50	0.43	83.75	0.53	115.00	0.16	146.25	0.14

21.43	0.47	52.58	0.43	83.83	0.54	115.08	0.16	146.33	0.14
21.42	0.46	52.67	0.43	83.92	0.55	115.17	0.16	146.42	0.14
21.50	0.45	52.75	0.43	84.00	0.56	115.25	0.16	146.50	0.14
21.58	0.45	52.83	0.43	84.08	0.57	115.33	0.16	146.58	0.14
21.67	0.44	52.92	0.44	84.17	0.58	115.42	0.16	146.67	0.14
21.75	0.43	53.00	0.44	84.25	0.60	115.50	0.16	146.75	0.14
21.83	0.43	53.08	0.44	84.33	0.62	115.58	0.16	146.83	0.14
21.92	0.42	53.17	0.44	84.42	0.64	115.67	0.16	146.92	0.13
22.00	0.42	53.25	0.44	84.50	0.66	115.75	0.16	147.00	0.13
22.08	0.41	53.33	0.45	84.58	0.69	115.83	0.16	147.08	0.13
22.17	0.41	53.42	0.45	84.67	0.72	115.92	0.16	147.17	0.13
22.25	0.40	53.50	0.45	84.75	0.74	116.00	0.16	147.25	0.13
22.33	0.40	53.58	0.45	84.83	0.77	116.08	0.15	147.33	0.13
22.42	0.39	53.67	0.46	84.92	0.79	116.17	0.15	147.42	0.13
22.50	0.39	53.75	0.46	85.00	0.81	116.25	0.15	147.50	0.13
22.58	0.38	53.83	0.46	85.08	0.82	116.33	0.16	147.58	0.13
22.67	0.38	53.92	0.46	85.17	0.84	116.42	0.16	147.67	0.13
22.75	0.37	54.00	0.47	85.25	0.85	116.50	0.16	147.75	0.13
22.83	0.37	54.08	0.47	85.33	0.85	116.58	0.16	147.83	0.13
22.92	0.36	54.17	0.47	85.42	0.86	116.67	0.16	147.92	0.13
23.00	0.36	54.25	0.48	85.50	0.87	116.75	0.16	148.00	0.13
23.08	0.36	54.33	0.48	85.58	0.86	116.83	0.16	148.08	0.13
23.17	0.35	54.42	0.49	85.67	0.87	116.92	0.16	148.17	0.13
23.25	0.35	54.50	0.49	85.75	0.86	117.00	0.16	148.25	0.13
23.33	0.34	54.58	0.50	85.83	0.85	117.08	0.16	148.33	0.13
23.42	0.34	54.67	0.50	85.92	0.85	117.17	0.16	148.42	0.13
23.50	0.34	54.75	0.51	86.00	0.84	117.25	0.16	148.50	0.13
23.58	0.33	54.83	0.52	86.08	0.83	117.33	0.16	148.58	0.13
23.67	0.33	54.92	0.53	86.17	0.82	117.42	0.16	148.67	0.13
23.75	0.32	55.00	0.53	86.25	0.81	117.50	0.16	148.75	0.13
23.83	0.32	55.08	0.54	86.33	0.81	117.58	0.16	148.83	0.13
23.92	0.32	55.17	0.55	86.42	0.79	117.67	0.16	148.92	0.13
24.00	0.31	55.25	0.55	86.50	0.78	117.75	0.16	149.00	0.13
24.08	0.31	55.33	0.55	86.58	0.77	117.83	0.16	149.08	0.13
24.17	0.30	55.42	0.56	86.67	0.76	117.92	0.16	149.17	0.13
24.25	0.30	55.50	0.56	86.75	0.74	118.00	0.16	149.25	0.12
24.33	0.30	55.58	0.57	86.83	0.74	118.08	0.16	149.33	0.12
24.42	0.30	55.67	0.57	86.92	0.73	118.17	0.16	149.42	0.12
24.50	0.29	55.75	0.58	87.00	0.71	118.25	0.16	149.50	0.12
24.58	0.29	55.83	0.58	87.08	0.71	118.33	0.16	149.58	0.12
24.67	0.29	55.92	0.58	87.17	0.70	118.42	0.16	149.67	0.12
24.75	0.28	56.00	0.58	87.25	0.68	118.50	0.16	149.75	0.12
24.83	0.28	56.08	0.58	87.33	0.68	118.58	0.15	149.83	0.12
24.92	0.28	56.17	0.58	87.42	0.66	118.67	0.15	149.92	0.12
25.00	0.27	56.25	0.58	87.50	0.66	118.75	0.15	150.00	0.12
25.08	0.27	56.33	0.58	87.58	0.65	118.83	0.15	150.08	0.12
25.17	0.27	56.42	0.58	87.67	0.64	118.92	0.15	150.17	0.12
25.25	0.27	56.50	0.59	87.75	0.63	119.00	0.15	150.25	0.12
25.33	0.26	56.58	0.59	87.83	0.62	119.08	0.15	150.33	0.12
25.42	0.26	56.67	0.59	87.92	0.62	119.17	0.15	150.42	0.12

25.50 0.26 56.75 0.59 88.00 0.61 119.25 0.15 150.50 0.12
25.58 0.25 56.83 0.59 88.08 0.60 119.33 0.15 150.58 0.12
25.67 0.25 56.92 0.59 88.17 0.59 119.42 0.15 150.67 0.12
25.75 0.25 57.00 0.59 88.25 0.58 119.50 0.15 150.75 0.12
25.83 0.25 57.08 0.59 88.33 0.58 119.58 0.15 150.83 0.12
25.92 0.25 57.17 0.59 88.42 0.57 119.67 0.15 150.92 0.12
26.00 0.24 57.25 0.59 88.50 0.57 119.75 0.15 151.00 0.12
26.08 0.24 57.33 0.59 88.58 0.56 119.83 0.16 151.08 0.12
26.17 0.24 57.42 0.59 88.67 0.55 119.92 0.16 151.17 0.12
26.25 0.24 57.50 0.59 88.75 0.55 120.00 0.16 151.25 0.12
26.33 0.23 57.58 0.58 88.83 0.54 120.08 0.16 151.33 0.12
26.42 0.23 57.67 0.58 88.92 0.53 120.17 0.16 151.42 0.12
26.50 0.23 57.75 0.58 89.00 0.53 120.25 0.16 151.50 0.12
26.58 0.23 57.83 0.57 89.08 0.52 120.33 0.16 151.58 0.12
26.67 0.23 57.92 0.57 89.17 0.51 120.42 0.16 151.67 0.12
26.75 0.22 58.00 0.57 89.25 0.51 120.50 0.16 151.75 0.12
26.83 0.22 58.08 0.57 89.33 0.50 120.58 0.16 151.83 0.12
26.92 0.22 58.17 0.56 89.42 0.50 120.67 0.16 151.92 0.12
27.00 0.22 58.25 0.56 89.50 0.49 120.75 0.16 152.00 0.12
27.08 0.22 58.33 0.56 89.58 0.48 120.83 0.16 152.08 0.12
27.17 0.21 58.42 0.55 89.67 0.48 120.92 0.16 152.17 0.12
27.25 0.21 58.50 0.55 89.75 0.47 121.00 0.16 152.25 0.12
27.33 0.21 58.58 0.54 89.83 0.47 121.08 0.16 152.33 0.11
27.42 0.21 58.67 0.54 89.92 0.47 121.17 0.17 152.42 0.11
27.50 0.21 58.75 0.53 90.00 0.47 121.25 0.17 152.50 0.11
27.58 0.21 58.83 0.53 90.08 0.46 121.33 0.17 152.58 0.11
27.67 0.20 58.92 0.52 90.17 0.46 121.42 0.17 152.67 0.11
27.75 0.20 59.00 0.52 90.25 0.45 121.50 0.17 152.75 0.11
27.83 0.20 59.08 0.52 90.33 0.45 121.58 0.17 152.83 0.11
27.92 0.20 59.17 0.51 90.42 0.44 121.67 0.17 152.92 0.11
28.00 0.19 59.25 0.51 90.50 0.44 121.75 0.17 153.00 0.11
28.08 0.19 59.33 0.50 90.58 0.44 121.83 0.17 153.08 0.11
28.17 0.19 59.42 0.50 90.67 0.43 121.92 0.17 153.17 0.11
28.25 0.19 59.50 0.49 90.75 0.43 122.00 0.17 153.25 0.11
28.33 0.19 59.58 0.49 90.83 0.43 122.08 0.17 153.33 0.11
28.42 0.19 59.67 0.49 90.92 0.43 122.17 0.17 153.42 0.11
28.50 0.19 59.75 0.48 91.00 0.42 122.25 0.18 153.50 0.11
28.58 0.18 59.83 0.48 91.08 0.42 122.33 0.18 153.58 0.11
28.67 0.18 59.92 0.47 91.17 0.42 122.42 0.18 153.67 0.11
28.75 0.18 60.00 0.47 91.25 0.42 122.50 0.18 153.75 0.11
28.83 0.18 60.08 0.47 91.33 0.41 122.58 0.18 153.83 0.11
28.92 0.18 60.17 0.46 91.42 0.41 122.67 0.18 153.92 0.11
29.00 0.18 60.25 0.46 91.50 0.41 122.75 0.18 154.00 0.11
29.08 0.18 60.33 0.45 91.58 0.41 122.83 0.18 154.08 0.11
29.17 0.18 60.42 0.45 91.67 0.41 122.92 0.18 154.17 0.11
29.25 0.17 60.50 0.44 91.75 0.41 123.00 0.18 154.25 0.11
29.33 0.17 60.58 0.44 91.83 0.40 123.08 0.18 154.33 0.11
29.42 0.17 60.67 0.44 91.92 0.40 123.17 0.18 154.42 0.11
29.50 0.17 60.75 0.43 92.00 0.40 123.25 0.18 154.50 0.11
29.58 0.17 60.83 0.43 92.08 0.40 123.33 0.18 154.58 0.11

29.67 0.17 60.92 0.42 92.17 0.40 123.42 0.18 154.67 0.11
29.75 0.17 61.00 0.42 92.25 0.39 123.50 0.18 154.75 0.11
29.83 0.17 61.08 0.42 92.33 0.39 123.58 0.18 154.83 0.11
29.92 0.16 61.17 0.42 92.42 0.39 123.67 0.18 154.92 0.11
30.00 0.16 61.25 0.41 92.50 0.39 123.75 0.18 155.00 0.11
30.08 0.16 61.33 0.41 92.58 0.38 123.83 0.18 155.08 0.11
30.17 0.16 61.42 0.40 92.67 0.38 123.92 0.18 155.17 0.11
30.25 0.16 61.50 0.40 92.75 0.38 124.00 0.18 155.25 0.11
30.33 0.16 61.58 0.40 92.83 0.38 124.08 0.18 155.33 0.11
30.42 0.16 61.67 0.40 92.92 0.38 124.17 0.18 155.42 0.11
30.50 0.16 61.75 0.39 93.00 0.37 124.25 0.18 155.50 0.11
30.58 0.16 61.83 0.39 93.08 0.37 124.33 0.19 155.58 0.11
30.67 0.16 61.92 0.39 93.17 0.37 124.42 0.19 155.67 0.11
30.75 0.16 62.00 0.38 93.25 0.37 124.50 0.19 155.75 0.11
30.83 0.15 62.08 0.38 93.33 0.37 124.58 0.19 155.83 0.10
30.92 0.15 62.17 0.38 93.42 0.37 124.67 0.20 155.92 0.11
31.00 0.15 62.25 0.38 93.50 0.37 124.75 0.20 156.00 0.10
31.08 0.15 62.33 0.39 93.58 0.37 124.83 0.20
31.17 0.15 62.42 0.39 93.67 0.37 124.92 0.20

V V I SSSSS U U A L (v 6.2.2018)
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***** D E T A I L E D O U T P U T *****

Input filename: C:\Program Files (x86)\Visual OTTHYMO 6.2\VO2\voim.dat

Output filename:
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546135b3-c2a8-4d80-932c-67f9b7ecc0de\
Summary filename:
C:\Users\jannaormond\AppData\Local\Civica\WH5\860df144-956f-4cfc-88fc-f31f1a71e94a\
546135b3-c2a8-4d80-932c-67f9b7ecc0de\

DATE: 04-10-2024 TIME: 01:25:31

USER:

COMMENTS:

** SIMULATION : 5yrII6.stm **

READ STORM File: C:\Users\jannaormond\AppData\Local\Temp\5b66f7bc-e58d-45d3-b0f6-6b3e1edcbf8b\d5e9b3f9
Ptotal= 56.50 mm Comments: Mount Hope-6 hour SCS Distribution Desig
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.00 2.26 1.50 5.65 3.00 12.43 4.50 3.39
0.17 2.26 1.67 5.65 3.17 12.43 4.67 3.39
0.33 2.26 1.83 5.65 3.33 12.43 4.83 3.39
0.50 3.39 2.00 6.78 3.50 5.65 5.00 2.26
0.67 3.39 2.17 6.78 3.67 5.65 5.17 2.26
0.83 3.39 2.33 6.78 3.83 5.65 5.33 2.26
1.00 3.39 2.50 33.90 4.00 4.52 5.50 2.26
1.17 3.39 2.67 61.02 4.17 4.52 5.67 2.26
1.33 3.39 2.83 88.14 4.33 4.52 5.83 2.26

CALIB NASHYD (5011) Area (ha)= 80.20 Curve Number (CN)= 65.0
ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.85

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39

0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Unit Hyd Qpeak (cms)= 3.621

PEAK FLOW (cms)= 1.208 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 12.696
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.225

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB STANDHYD (5012) Area (ha)= 39.40
ID= 1 DT= 5.0 min Total Imp(%)= 38.00 Dir. Conn.(%)= 24.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.97 24.43
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 512.51 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

--- TRANSFORMED HYETOGRAPH ---
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39

0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 31.75
over (min) 5.00 25.00
Storage Coeff. (min)= 7.16 (ii) 20.91 (ii)
Unit Hyd. Tpeak (min)= 5.00 25.00
Unit Hyd. peak (cms)= 0.17 0.05

TOTALS
PEAK FLOW (cms)= 2.08 1.06 2.636 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 50.50 15.46 23.87
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.27 0.42

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 65.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0100)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (5011):	80.20	1.208	3.92	12.70
+ ID2= 2 (5012):	39.40	2.636	3.00	23.87
=====				
ID = 3 (0100):	119.60	2.865	3.00	16.38

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0502)|

| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1537.5) ----->			
Distance	Elevation	Manning	
0.00	89.30	0.1100	
4.20	89.28	0.1100	
9.03	88.80	0.1100	
21.55	88.78	0.1100	
29.06	88.24	0.1100	
39.87	87.83	0.1100	
55.54	87.84	0.1100 /0.0700	Main Channel
57.54	86.84	0.0700	Main Channel
59.04	86.84	0.0700	Main Channel
61.04	87.84	0.0700 /0.1100	Main Channel
74.10	87.86	0.1100	
87.72	88.07	0.1100	
101.34	88.18	0.1100	
113.53	88.23	0.1100	
128.57	88.32	0.1100	
142.19	88.61	0.1100	
155.81	88.53	0.1100	
183.05	88.85	0.1100	
187.19	88.84	0.1100	
211.21	88.88	0.1100	

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.10	86.94	.202E+03	0.0	0.25	78.80
0.20	87.04	.452E+03	0.1	0.37	52.91
0.30	87.14	.749E+03	0.3	0.47	42.34
0.40	87.24	.109E+04	0.5	0.55	36.26
0.50	87.34	.149E+04	0.8	0.62	32.18
0.60	87.44	.193E+04	1.1	0.68	29.19
0.70	87.54	.241E+04	1.5	0.74	26.87
0.80	87.64	.295E+04	2.0	0.79	25.01
0.90	87.74	.353E+04	2.5	0.84	23.46
1.00	87.84	.421E+04	3.1	0.89	22.39
1.10	87.94	.490E+04	4.5	0.63	31.56
1.21	88.05	.150E+05	7.1	0.56	35.43
1.33	88.17	.233E+05	10.6	0.54	36.49
1.44	88.28	.346E+05	15.5	0.53	37.18
1.56	88.40	.484E+05	22.8	0.56	35.35
1.67	88.51	.634E+05	32.1	0.60	32.90
1.79	88.63	.807E+05	41.2	0.61	32.65
1.90	88.74	.101E+06	54.6	0.64	30.77
2.02	88.86	.124E+06	64.7	0.62	31.85

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL

(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0100) 119.60 2.86 3.00 16.38 0.96 0.87
OUTFLOW: ID= 1 (0502) 119.60 2.02 3.58 16.37 0.81 0.80

CALIB			
STANDHYD (5022)			
ID= 1 DT= 5.0 min			
	Area	(ha)=	51.10
	Total Imp(%)=	48.00	Dir. Conn.(%)= 34.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 24.53 26.57
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 583.67 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	'	TIME	RAIN	TIME
hrs	mm/hr	hrs	mm/hr	hrs	hrs	mm/hr	hrs
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 30.86
over (min) 10.00 25.00
Storage Coeff. (min)= 7.74 (ii) 21.65 (ii)
Unit Hyd. Tpeak (min)= 10.00 25.00
Unit Hyd. peak (cms)= 0.13 0.05

TOTALS

PEAK FLOW (cms)= 3.51 1.10 4.077 (iii)
TIME TO PEAK (hrs)= 3.00 3.33 3.00
RUNOFF VOLUME (mm)= 55.00 14.58 28.32
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.97 0.26 0.50

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0102)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0502):	119.60	2.022	3.58	16.37
+ ID2= 2 (5022):	51.10	4.077	3.00	28.32
=====				
ID = 3 (0102):	170.70	5.458	3.08	19.95

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0503)|
| IN= 2----> OUT= 1 | Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1157.9) ----->			
Distance	Elevation	Manning	
0.00	86.78	0.0900	
25.34	87.17	0.0900	
68.44	87.04	0.0900	
117.13	86.81	0.0900	
125.36	85.21	0.0900 /0.0700	Main Channel
127.36	84.21	0.0700	Main Channel
128.86	84.21	0.0700	Main Channel
130.86	85.21	0.0700 /0.0900	Main Channel
131.88	86.36	0.0900	
140.63	86.77	0.0900	
168.26	86.90	0.0900	
169.81	87.10	0.0900	
202.11	87.50	0.0900	
239.06	87.35	0.0900	
270.29	87.83	0.0900	
283.90	87.90	0.0900	
297.51	87.86	0.0900	
324.73	87.89	0.0900	

351.95 87.78 0.0900
388.59 87.46 0.0900

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.17	84.38	.114E+03	0.1	0.34	18.34
0.33	84.54	.269E+03	0.4	0.50	12.51
0.50	84.71	.465E+03	0.8	0.62	10.07
0.67	84.88	.703E+03	1.4	0.72	8.63
0.83	85.04	.982E+03	2.1	0.81	7.65
1.00	85.21	.130E+04	3.1	0.89	6.93
1.21	85.42	.177E+04	5.0	1.06	5.87
1.41	85.62	.234E+04	7.4	1.17	5.28
1.62	85.83	.300E+04	10.2	1.27	4.89
1.83	86.04	.376E+04	13.6	1.35	4.60
2.03	86.24	.462E+04	17.6	1.42	4.37
2.24	86.45	.560E+04	22.1	1.47	4.22
2.45	86.66	.695E+04	27.6	1.48	4.20
2.66	86.87	.925E+04	31.2	1.25	4.94
2.86	87.07	.168E+05	43.1	0.96	6.48
3.07	87.28	.297E+05	67.7	0.85	7.30
3.28	87.49	.456E+05	103.1	0.84	7.38
3.48	87.69	.663E+05	159.6	0.89	6.93
3.69	87.90	.907E+05	223.4	0.92	6.77

<---- hydrograph ----> <-pipe / channel->

AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0102)	170.70	5.46	3.08	19.95	1.24
OUTFLOW: ID= 1 (0503)	170.70	5.07	3.08	19.95	1.21

CALIB
STANDHYD (5032)
ID= 1 DT= 5.0 min

Area (ha)= 13.80
Total Imp(%)= 76.00 Dir. Conn.(%)= 67.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 10.49 3.31
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 303.32 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 47.47
over (min)= 5.00 20.00
Storage Coeff. (min)= 5.23 (ii) 16.94 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS

PEAK FLOW (cms)= 2.14 0.25 2.311 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 20.36 40.55
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.36 0.72

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0104)

1 + 2 = 3

AREA	QPEAK	TPEAK	R.V.
(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0503):	170.70	5.070	3.08
+ ID2= 2 (5032):	13.80	2.311	3.00
			40.55

ID = 3 (0104): 184.50 6.425 3.00 21.49

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0504)					
IN= 2----> OUT= 1					
Routing time step (min)= 5.00					
<----- DATA FOR SECTION (815.4) ----->					
Distance	Elevation	Manning			
19.10	82.03	0.0900			
29.01	83.14	0.0900			
40.83	82.56	0.0900			
81.51	82.27	0.0900			
122.18	82.68	0.0900			
169.31	82.61	0.0900			
217.10	82.90	0.0900			
229.61	83.66	0.0900 / 0.0700	Main Channel		
232.80	81.85	0.0700	Main Channel		
243.24	83.87	0.0700	Main Channel		
257.77	84.06	0.0900			
312.01	83.52	0.0900			
415.18	83.86	0.0900			
461.15	83.40	0.0900			
501.83	83.53	0.0900			
513.93	82.96	0.0900			
526.85	83.23	0.0900			
569.63	83.21	0.0900			
610.76	83.63	0.0900			
663.54	83.88	0.0900			

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.11	81.96	.117E+02	0.0	0.18	23.95
0.23	82.08	.492E+02	0.1	0.28	15.67
0.34	82.19	.135E+03	0.2	0.34	13.00
0.45	82.30	.312E+03	0.4	0.32	13.44
0.57	82.42	.116E+04	1.2	0.28	15.74
0.68	82.53	.287E+04	3.5	0.32	13.85
0.79	82.64	.549E+04	7.0	0.33	13.13
0.91	82.76	.101E+05	14.9	0.39	11.28
1.02	82.87	.155E+05	27.5	0.47	9.38
1.13	82.98	.214E+05	45.2	0.55	7.89
1.25	83.10	.277E+05	67.2	0.64	6.87
1.36	83.21	.344E+05	93.6	0.71	6.12
1.47	83.32	.426E+05	125.3	0.77	5.67
1.59	83.44	.516E+05	162.2	0.82	5.30
1.70	83.55	.620E+05	204.2	0.86	5.06
1.81	83.66	.747E+05	254.0	0.89	4.90

1.95 83.80 .924E+05 324.9 0.92 4.74
2.08 83.93 .113E+06 411.3 0.95 4.59
2.21 84.06 .135E+06 515.5 1.00 4.37

<---- hydrograph ----> <-pipe / channel->					
AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0104)	184.50	6.43	3.00	21.49	0.78
OUTFLOW: ID= 1 (0504)	184.50	5.13	3.25	21.49	0.73

CALIB
STANDHYD (5042)
ID= 1 DT= 5.0 min

Area (ha)= 7.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 5.77 1.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 226.57 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 44.72
over (min) 5.00 20.00
Storage Coeff. (min)= 4.39 (ii) 16.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.23 0.06
TOTALS
PEAK FLOW (cms)= 1.18 0.14 1.275 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 18.94 39.45
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.34 0.70

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0106)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0504): 184.50 5.126 3.25 21.49
+ ID2= 2 (5042): 7.70 1.275 3.00 39.45
ID = 3 (0106): 192.20 5.468 3.25 22.21

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5212)
ID= 1 DT= 5.0 min
Area (ha)= 15.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 66.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.78 3.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 323.52 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN

Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----
TIME RAIN | TIME RAIN | TIME RAIN | TIME RAIN
hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.083 2.26 | 1.583 5.65 | 3.083 12.43 | 4.58 3.39
0.167 2.26 | 1.667 5.65 | 3.167 12.43 | 4.67 3.39
0.250 2.26 | 1.750 5.65 | 3.250 12.43 | 4.75 3.39
0.333 2.26 | 1.833 5.65 | 3.333 12.43 | 4.83 3.39
0.417 2.26 | 1.917 5.65 | 3.417 12.43 | 4.92 3.39
0.500 2.26 | 2.000 5.65 | 3.500 12.43 | 5.00 3.39
0.583 3.39 | 2.083 6.78 | 3.583 5.65 | 5.08 2.26
0.667 3.39 | 2.167 6.78 | 3.667 5.65 | 5.17 2.26
0.750 3.39 | 2.250 6.78 | 3.750 5.65 | 5.25 2.26
0.833 3.39 | 2.333 6.78 | 3.833 5.65 | 5.33 2.26
0.917 3.39 | 2.417 6.78 | 3.917 5.65 | 5.42 2.26
1.000 3.39 | 2.500 6.78 | 4.000 5.65 | 5.50 2.26
1.083 3.39 | 2.583 33.90 | 4.083 4.52 | 5.58 2.26
1.167 3.39 | 2.667 33.90 | 4.167 4.52 | 5.67 2.26
1.250 3.39 | 2.750 61.02 | 4.250 4.52 | 5.75 2.26
1.333 3.39 | 2.833 61.02 | 4.333 4.52 | 5.83 2.26
1.417 3.39 | 2.917 88.14 | 4.417 4.52 | 5.92 2.26
1.500 3.39 | 3.000 88.14 | 4.500 4.52 | 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 44.29
over (min) 5.00 20.00
Storage Coeff. (min)= 6.58 (ii) 18.62 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.18 0.06
TOTALS

PEAK FLOW (cms)= 2.33 0.99 2.985 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 55.00 20.06 32.29
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.97 0.36 0.57

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0521)
IN= 2---> OUT= 1 | Routing time step (min)= 5.00

hrs mm/hr | hrs mm/hr | hrs mm/hr | hrs mm/hr
0.083 2.26 | 1.583 5.65 | 3.083 12.43 | 4.58 3.39
0.167 2.26 | 1.667 5.65 | 3.167 12.43 | 4.67 3.39
0.250 2.26 | 1.750 5.65 | 3.250 12.43 | 4.75 3.39
0.333 2.26 | 1.833 5.65 | 3.333 12.43 | 4.83 3.39
0.417 2.26 | 1.917 5.65 | 3.417 12.43 | 4.92 3.39
0.500 2.26 | 2.000 5.65 | 3.500 12.43 | 5.00 3.39
0.583 3.39 | 2.083 6.78 | 3.583 5.65 | 5.08 2.26
0.667 3.39 | 2.167 6.78 | 3.667 5.65 | 5.17 2.26
0.750 3.39 | 2.250 6.78 | 3.750 5.65 | 5.25 2.26
0.833 3.39 | 2.333 6.78 | 3.833 5.65 | 5.33 2.26
0.917 3.39 | 2.417 6.78 | 3.917 5.65 | 5.42 2.26
1.000 3.39 | 2.500 6.78 | 4.000 5.65 | 5.50 2.26
1.083 3.39 | 2.583 33.90 | 4.083 4.52 | 5.58 2.26
1.167 3.39 | 2.667 33.90 | 4.167 4.52 | 5.67 2.26
1.250 3.39 | 2.750 61.02 | 4.250 4.52 | 5.75 2.26
1.333 3.39 | 2.833 61.02 | 4.333 4.52 | 5.83 2.26
1.417 3.39 | 2.917 88.14 | 4.417 4.52 | 5.92 2.26
1.500 3.39 | 3.000 88.14 | 4.500 4.52 | 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 56.11
over (min) 5.00 20.00
Storage Coeff. (min)= 5.44 (ii) 16.38 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06
TOTALS

PEAK FLOW (cms)= 2.39 0.36 2.634 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 24.08 41.52
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.43 0.73

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 77.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (5202)
ID= 1 DT= 5.0 min
Area (ha)= 29.70
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 14.85 14.85
Dep. Storage (mm)= 1.50 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 444.97 40.00

----- DATA FOR SECTION (815.4) -----

Distance Elevation Manning
415.18 83.86 0.0900
461.15 83.40 0.0900
501.83 83.53 0.0900 /0.0700 Main Channel
513.93 82.96 0.0700 Main Channel
526.85 83.23 0.0700 /0.0900 Main Channel
569.63 83.21 0.0900
610.76 83.63 0.0900
663.54 83.88 0.0900

----- TRAVEL TIME TABLE -----

DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.05 83.00 .378E+02 0.0 0.11 83.81
0.09 83.05 .151E+03 0.0 0.17 52.79
0.14 83.09 .340E+03 0.1 0.22 40.29
0.18 83.14 .605E+03 0.3 0.27 33.26
0.23 83.18 .946E+03 0.5 0.32 28.66
0.27 83.23 .151E+04 0.9 0.33 27.77
0.32 83.27 .323E+04 1.8 0.31 29.51
0.37 83.32 .510E+04 3.2 0.34 26.44
0.42 83.37 .713E+04 5.0 0.38 23.61
0.46 83.42 .934E+04 7.3 0.42 21.44
0.51 83.47 .121E+05 10.0 0.45 20.23
0.56 83.52 .156E+05 13.4 0.47 19.44
0.61 83.57 .196E+05 17.7 0.49 18.52
0.66 83.61 .240E+05 22.8 0.52 17.49
0.71 83.66 .286E+05 28.4 0.54 16.75
0.75 83.71 .336E+05 34.7 0.56 16.14
0.80 83.76 .390E+05 41.8 0.58 15.55
0.85 83.81 .448E+05 49.8 0.60 14.99
0.90 83.86 .510E+05 58.8 0.63 14.46

hydrograph <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5202) 29.70 2.98 3.00 32.29 0.36 0.34
OUTFLOW: ID= 1 (0521) 29.70 1.50 3.25 32.28 0.30 0.31

ADD HYD (0113)
1 + 2 = 3
ID1= 1 (0521): 29.70 1.503 3.25 32.28

+ ID2= 2 (5212): 15.70 2.634 3.00 41.52
=====

ID = 3 (0113): 45.40 3.870 3.00 35.47

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0114)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0106): 192.20 5.468 3.25 22.21
+ ID2= 2 (0113): 45.40 3.870 3.00 35.47
=====

ID = 3 (0114): 237.60 8.746 3.00 24.74

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0505)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

<----- DATA FOR SECTION (553.6) ----->

Distance	Elevation	Manning
0.00	81.24	0.1100
33.01	80.98	0.1100
49.97	81.27	0.1100
54.18	80.35	0.1100
60.88	81.23	0.1100
69.13	79.02	0.1100
92.42	79.04	0.1100
98.70	80.89	0.1100
128.88	81.13	0.1100
199.00	81.23	0.1100
266.11	81.68	0.1100
306.94	81.73	0.1100
331.74	81.55	0.1100 / 0.0700 Main Channel
336.74	80.15	0.0700 Main Channel
346.34	81.64	0.0700 / 0.0900 Main Channel
394.77	81.68	0.0900
431.64	81.44	0.0900
477.44	82.08	0.0900
481.25	82.81	0.0900
501.51	83.16	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.12	79.13	.418E+03	0.4	0.15	18.59
0.23	79.25	.899E+03	1.3	0.25	11.41

0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 41.63
over (min) 5.00 20.00
Storage Coeff. (min)= 5.46 (ii) 17.79 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06

TOTALS
PEAK FLOW (cms)= 2.38 0.26 2.558 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 18.34 39.24
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.32 0.69

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 68.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0108)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0505): 237.60 8.136 3.08 24.74
+ ID2= 2 (0505): 15.90 2.558 3.00 39.24
=====

ID = 3 (0108): 253.50 9.827 3.00 25.65

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0506)
IN= 2----> OUT= 1
Routing time step (min)'= 5.00

0.35	79.36	.140E+04	2.7	0.33	8.70
0.46	79.48	.191E+04	4.4	0.39	7.22
0.58	79.59	.244E+04	6.5	0.46	6.26
0.69	79.71	.299E+04	8.9	0.51	5.58
0.81	79.82	.355E+04	11.7	0.56	5.08
0.92	79.94	.413E+04	14.7	0.61	4.68
1.04	80.05	.472E+04	18.1	0.65	4.36
1.15	80.17	.533E+04	21.7	0.70	4.09
1.27	80.28	.598E+04	25.7	0.74	3.88
1.38	80.40	.666E+04	29.7	0.76	3.74
1.50	80.51	.740E+04	33.7	0.78	3.67
1.61	80.63	.822E+04	38.1	0.79	3.59
1.73	80.74	.909E+04	43.1	0.81	3.52
1.84	80.86	.100E+05	48.6	0.83	3.45
1.96	80.97	.111E+05	48.4	0.74	3.83
2.07	81.09	.128E+05	43.8	0.59	4.86
2.19	81.21	.155E+05	40.6	0.45	6.35

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0114) 237.60 8.75 3.00 24.74 0.68 0.51
OUTFLOW: ID= 1 (0505) 237.60 8.14 3.08 24.74 0.65 0.49

CALIB
STANDHYD (5052)
ID= 1 DT= 5.0 min
Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00
IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39

<----- DATA FOR SECTION (304.1) ----->

Distance	Elevation	Manning
0.00	81.42	0.0900
7.45	81.36	0.0900
32.34	80.38	0.0900
45.97	80.05	0.0900
65.23	79.93	0.0900
84.49	80.35	0.0900
113.49	80.02	0.0900
136.48	80.07	0.0900
188.81	79.81	0.0900
197.86	79.25	0.0900 / 0.0700 Main Channel
200.70	78.22	0.0700 Main Channel
203.29	79.35	0.0700 / 0.0900 Main Channel
204.01	79.67	0.0900
236.47	80.40	0.0900
277.80	80.48	0.0900
305.35	80.37	0.0900
346.67	80.41	0.0900
387.99	80.33	0.0900
415.54	80.53	0.0900
447.88	80.49	0.0900

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.11	78.34	.979E+01	0.0	0.23	21.53
0.23	78.45	.392E+02	0.0	0.37	13.56
0.34	78.56	.881E+02	0.1	0.48	10.35
0.46	78.68	.157E+03	0.3	0.58	8.54
0.57	78.79	.245E+03	0.6	0.67	7.36
0.68	78.91	.352E+03	0.9	0.76	6.52
0.80	79.02	.480E+03	1.4	0.84	5.88
0.91	79.13	.627E+03	1.9	0.92	5.38
1.03	79.25	.793E+03	2.7	0.99	4.98
1.15	79.37	.103E+04	3.8	1.09	4.55
1.28	79.50	.135E+04	5.2	1.16	4.28
1.40	79.62	.175E+04	7.1	1.20	4.12
1.52	79.75	.228E+04	9.3	1.21	4.08
1.65	79.87	.318E+04	11.7	1.10	4.52
1.77	80.00	.524E+04	15.8	0.90	5.52
1.90	80.12	.973E+04	24.3	0.74	6.69
2.02	80.24	.158E+05	39.7	0.75	6.62
2.15	80.37	.230E+05	59.2	0.77	6.46
2.27	80.49	.349E+05	90.3	0.77	6.44

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0108) 253.50 9.83 3.00 25.65 1.55 1.19

OUTFLOW: ID= 1 (0506) 253.50 9.33 3.08 25.65 1.53 1.21

CALIB
STANDHYD (5062)
ID= 1 DT= 5.0 min

Area (ha)= 11.70
Total Imp(%)= 75.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 8.78 2.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 279.28 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 49.01
over (min) 5.00 20.00
Storage Coeff. (min)= 4.98 (ii) 16.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06
TOTALS
PEAK FLOW (cms)= 1.77 0.23
TIME TO PEAK (hrs)= 3.00 3.17

RUNOFF VOLUME (mm)= 50.50 20.65 40.05
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.37 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0110)
1 + 2 = 3

AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0506): 253.50 9.328 3.08 25.65
+ ID2= 2 (5062): 11.70 1.929 3.00 40.05
=====

ID = 3 (0110): 265.20 10.344 3.08 26.29

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5102)
ID= 1 DT= 5.0 min

Area (ha)= 1.70
Total Imp(%)= 64.00 Dir. Conn.(%)= 52.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 1.09 0.61
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 106.46 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26

0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 38.44
over (min) 5.00 20.00
Storage Coeff. (min)= 2.79 (ii) 15.53 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.28 0.07
TOTALS
PEAK FLOW (cms)= 0.21 0.04
TIME TO PEAK (hrs)= 3.00 3.17
RUNOFF VOLUME (mm)= 50.50 17.16 34.49
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.30 0.61

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ROUTE CHN(0511)
IN= 2---> OUT= 1

Routing time step (min)= 5.00

----- DATA FOR SECTION (553.6) -----
Distance Elevation Manning
0.00 81.24 0.1100
33.01 80.98 0.1100
49.97 81.27 0.1100
54.18 80.35 0.1100
60.88 81.23 0.1100 / 0.0700 Main Channel
69.13 79.02 0.0700 Main Channel
92.42 79.04 0.0700 Main Channel
98.70 80.89 0.0700 / 0.1100 Main Channel
128.88 81.13 0.1100
199.00 81.23 0.1100

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.12 79.13 .361E+03 0.6 0.24 9.91
0.23 79.25 .776E+03 2.1 0.40 6.09
0.35 79.37 .121E+04 4.3 0.52 4.65
0.47 79.48 .165E+04 7.1 0.63 3.85
0.59 79.60 .211E+04 10.5 0.72 3.34
0.70 79.72 .258E+04 14.4 0.81 2.98
0.82 79.84 .307E+04 18.8 0.89 2.71
0.94 79.95 .357E+04 23.8 0.97 2.50
1.05 80.07 .408E+04 29.2 1.04 2.33
1.17 80.19 .461E+04 35.1 1.10 2.19
1.29 80.30 .515E+04 41.5 1.17 2.07
1.41 80.42 .571E+04 48.4 1.23 1.97
1.52 80.54 .631E+04 55.8 1.28 1.88
1.64 80.66 .695E+04 63.8 1.33 1.81
1.76 80.77 .762E+04 72.3 1.38 1.76
1.87 80.89 .833E+04 81.4 1.42 1.71
2.00 81.02 .931E+04 92.4 1.44 1.68
2.13 81.14 .109E+05 104.8 1.39 1.74
2.25 81.27 .140E+05 120.9 1.25 1.93

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (5102) 1.70 0.24 3.00 34.49 0.05 0.24
OUTFLOW: ID= 1 (0511) 1.70 0.18 3.00 34.48 0.03 0.24

CALIB
STANDHYD (5112)
ID= 1 DT= 5.0 min

Area (ha)= 3.00
Total Imp(%)= 69.00 Dir. Conn.(%)= 58.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 2.07 0.93
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 141.42 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr

0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	46.23
over (min)	5.00	20.00
Storage Coeff. (min)=	3.31 (ii)	15.14 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.26	0.07
TOTALS		
PEAK FLOW (cms)=	0.42	0.07
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	20.13
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.36

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0117)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0511):	1.70	0.176	3.00	34.48
+ ID2= 2 (5112):	3.00	0.468	3.00	37.74
=====				
ID = 3 (0117):	4.70	0.644	3.00	36.56

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0512)				
IN= 2---> OUT= 1				
Routing time step (min)'= 5.00				
<----- DATA FOR SECTION (484.2) ----->				
Distance	Elevation	Manning		
0.00	80.80	0.0900		
9.73	80.46	0.0900		
14.10	82.04	0.0900		
17.18	82.28	0.0900		
41.13	82.12	0.0900 /0.0700	Main Channel	
46.88	79.71	0.0700	Main Channel	
51.41	80.90	0.0700 /0.0900	Main Channel	
94.29	80.56	0.0900		
175.64	80.72	0.0900		
192.09	80.85	0.0900		

<----- TRAVEL TIME TABLE ----->					
DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)
0.13	79.84	.255E+02	0.0	0.14	54.71
0.26	79.98	.102E+03	0.0	0.23	34.47
0.40	80.11	.229E+03	0.1	0.30	26.30
0.53	80.24	.408E+03	0.3	0.36	21.71
0.66	80.37	.637E+03	0.6	0.42	18.71
0.79	80.51	.934E+03	0.9	0.46	16.84
0.93	80.64	.245E+04	1.6	0.31	24.96
1.06	80.77	.873E+04	4.6	0.25	31.51
1.19	80.90	.179E+05	11.4	0.30	26.08
1.32	81.04	.278E+05	22.6	0.38	20.45
1.46	81.17	.381E+05	37.5	0.46	16.91
1.60	81.31	.484E+05	55.4	0.54	14.57
1.74	81.45	.588E+05	76.0	0.61	12.90
1.87	81.59	.693E+05	99.3	0.67	11.63
2.01	81.72	.798E+05	125.0	0.73	10.64
2.15	81.86	.903E+05	153.1	0.80	9.83
2.29	82.00	.101E+06	183.5	0.85	9.16
2.42	82.14	.112E+06	214.3	0.90	8.68
2.56	82.27	.123E+06	244.4	0.93	8.40

<---- hydrograph ---->					
<-pipe / channel->					
	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH
	(ha)	(cms)	(hrs)	(mm)	(m)
INFLOW : ID= 2 (0117)	4.70	0.64	3.00	36.56	0.69
OUTFLOW: ID= 1 (0512)	4.70	0.38	3.08	36.50	0.57

CALIB			
STANDHYD (5122)			
ID= 1 DT= 5.0 min			
Area (ha)=	3.90		
Total Imp(%)=	68.00	Dir. Conn.(%)=	57.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	2.65	1.25
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	161.25	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	45.55
over (min)	5.00	20.00
Storage Coeff. (min)=	3.58 (ii)	15.48 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.26	0.07
TOTALS		
PEAK FLOW (cms)=	0.53	0.09
TIME TO PEAK (hrs)=	3.00	3.17
RUNOFF VOLUME (mm)=	50.50	20.00
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.36

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 71.0 Ia = Dep. Storage (Above)
- (ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
- (iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0119)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0512):	4.70	0.384	3.08	36.50
+ ID2= 2 (5122):	3.90	0.597	3.00	37.38
=====				
ID = 3 (0119):	8.60	0.955	3.00	36.90

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0120)				
1 + 2 = 3				
	AREA	QPEAK	TPEAK	R.V.
	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0110):	265.20	10.344	3.08	26.29
+ ID2= 2 (0119):	8.60	0.955	3.00	36.90
=====				
ID = 3 (0120):	273.80	11.063	3.00	26.62

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB			
NASHYD (6011)			
ID= 1 DT= 5.0 min			
Area (ha)=	44.10	Curve Number (CN)=	62.0
Ia (mm)=	8.00	# of Linear Res.(N)=	3.00
U.H. Tp(hrs)=	0.83		

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39

0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Unit Hyd Qpeak (cms)= 2.027

PEAK FLOW (cms)= 0.608 (i)
TIME TO PEAK (hrs)= 3.917
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6012)
ID= 1 DT= 5.0 min
Area (ha)= 11.00
Total Imp(%)= 28.00 Dir. Conn.(%)= 16.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.08 7.92
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 270.00 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26

0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 26.15
over (min) 5.00 20.00
Storage Coeff. (min)= 4.88 (ii) 19.74 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06

TOTALS

PEAK FLOW (cms)= 0.41 0.30 0.600 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.46 19.39
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.34

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!
***** WARNING:FOR AREAS WITH IMPERVIOUS RATIOS BELOW 20%
YOU SHOULD CONSIDER SPLITTING THE AREA.

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0124)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (6011): 44.10 0.600 3.92 11.52
+ ID2= 2 (6012): 11.00 0.600 3.00 19.39
===== ID = 3 (0124): 55.10 0.784 3.50 13.09

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
NASHYD (6021)
Area (ha)= 43.60 Curve Number (CN)= 62.0

ID= 1 DT= 5.0 min Ia (mm)= 8.00 # of Linear Res.(N)= 3.00
U.H. Tp(hrs)= 0.95

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26

Unit Hyd Qpeak (cms)= 1.753

PEAK FLOW (cms)= 0.545 (i)
TIME TO PEAK (hrs)= 4.000
RUNOFF VOLUME (mm)= 11.521
TOTAL RAINFALL (mm)= 56.500
RUNOFF COEFFICIENT = 0.204

(i) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB
STANDHYD (6022)
ID= 1 DT= 5.0 min
Area (ha)= 12.90
Total Imp(%)= 35.00 Dir. Conn.(%)= 23.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 4.51 8.38
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 293.26 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----							
TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 26.96
over (min) 5.00 20.00
Storage Coeff. (min)= 5.12 (ii) 19.80 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.21 0.06

TOTALS

PEAK FLOW (cms)= 0.69 0.33 0.896 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 13.66 22.13
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.24 0.39

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 62.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0125)
1 + 2 = 3
AREA QPEAK TPEAK R.V.

	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0021):	43.60	0.545	4.00	11.52
+ ID2= 2 (0022):	12.90	0.896	3.00	22.13

ID = 3 (0125):	56.50	0.981	3.00	13.94

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0126)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0124):	55.10	0.784	3.50	13.09
+ ID2= 2 (0125):	56.50	0.981	3.00	13.94

ID = 3 (0126):	111.60	1.699	3.00	13.52

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0003)	Routing time step (min)'
IN= 2----> OUT= 1	5.00

<----- DATA FOR SECTION (2135.9) ----->

Distance	Elevation	Manning	
0.00	92.58	0.1400	
8.54	92.59	0.1400	
22.11	92.47	0.1400	
48.74	91.83	0.1400	
67.59	91.58	0.1400	
86.45	91.21	0.1400	
103.50	90.80	0.1400	
118.09	90.23	0.1400	
127.84	90.09	0.1400 / 0.0700	Main Channel
129.84	89.59	0.0700	Main Channel
130.34	90.09	0.0700 / 0.1400	Main Channel
140.57	90.14	0.1400	
161.87	90.11	0.1400	
177.03	90.04	0.1400	
188.67	89.87	0.1400	
199.59	90.31	0.1400	
212.02	90.96	0.1400	
225.58	91.35	0.1400	
252.71	91.66	0.1400	
274.11	91.86	0.1400	

<----- TRAVEL TIME TABLE ----->

DEPTH	ELEV	VOLUME	FLOW RATE	VELOCITY	TRAV.TIME
(m)	(m)	(cu.m.)	(cms)	(m/s)	(min)

0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	43.25
over (min)	5.00	20.00
Storage Coeff. (min)=	6.89 (ii)	19.04 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.18	0.06
TOTALS		
PEAK FLOW (cms)=	2.46	1.18
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	55.00	19.85
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT	0.97	0.35

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 72.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

CALIB	AREA	(ha)	21.10
STANDHYD (6102)	Total Imp(%)=	50.00	Dir. Conn.(%)= 35.00
ID= 1 DT= 5.0 min			

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	10.55
Dep. Storage (mm)=	1.50
Average Slope (%)=	1.00
Length (m)=	375.06
Mannings n	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

0.12	89.71	.358E+02	0.0	0.19	81.29
0.25	89.84	.143E+03	0.0	0.30	51.21
0.37	89.96	.689E+03	0.2	0.23	67.44
0.50	90.09	.278E+04	0.6	0.20	77.83
0.67	90.26	.132E+05	3.4	0.23	65.31
0.83	90.42	.262E+05	9.3	0.33	46.76
1.00	90.59	.403E+05	17.9	0.41	37.64
1.17	90.76	.556E+05	28.8	0.48	32.17
1.33	90.92	.721E+05	42.0	0.53	28.63
1.50	91.09	.903E+05	57.1	0.58	26.37
1.67	91.26	.110E+06	74.7	0.62	24.65
1.83	91.42	.133E+06	93.4	0.64	23.71
2.00	91.59	.159E+06	113.6	0.66	23.26
2.17	91.76	.188E+06	136.6	0.67	22.96
2.33	91.92	.222E+06	168.5	0.70	21.97
2.50	92.09	.258E+06	211.3	0.75	20.33
2.67	92.26	.294E+06	258.5	0.81	18.98
2.83	92.42	.332E+06	310.1	0.86	17.85
3.00	92.59	.371E+06	358.0	0.88	17.29

	AREA	QPEAK	TPEAK	R.V.	MAX DEPTH	MAX VEL
	(ha)	(cms)	(hrs)	(mm)	(m)	(m/s)
INFLOW : ID= 2 (0126)	111.60	1.70	3.00	13.52	0.57	0.21
OUTFLOW: ID= 1 (0603)	111.60	1.06	4.67	13.52	0.53	0.20

CALIB	Area	(ha)	34.60
STANDHYD (6032)	Total Imp(%)=	47.00	Dir. Conn.(%)= 32.00
ID= 1 DT= 5.0 min			

IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	16.26
Dep. Storage (mm)=	1.50
Average Slope (%)=	1.00
Length (m)=	480.28
Mannings n	0.013

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39

----- TRANSFORMED HYETOGRAPH -----

TIME	RAIN	TIME	RAIN	TIME	RAIN	TIME	RAIN
hrs	mm/hr	hrs	mm/hr	hrs	mm/hr	hrs	mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	41.57
over (min)	5.00	20.00
Storage Coeff. (min)=	5.94 (ii)	18.28 (ii)
Unit Hyd. Tpeak (min)=	5.00	20.00
Unit Hyd. peak (cms)=	0.19	0.06

PEAK FLOW (cms)=	1.68	0.66
TIME TO PEAK (hrs)=	3.00	3.25
RUNOFF VOLUME (mm)=	55.00	18.90
TOTAL RAINFALL (mm)=	56.50	56.50
RUNOFF COEFFICIENT	0.97	0.33

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 70.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0128)	AREA	QPEAK	TPEAK	R.V.
1 + 2 = 3	(ha)	(cms)	(hrs)	(mm)
ID1= 1 (0603):	111.60	1.061	4.67	13.52
+ ID2= 2 (6032):	34.60	3.238	3.00	31.10

=====

ID = 3 (0128): 146.20 3.546 3.00 17.68

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ADD HYD (0128) |

| 3 + 2 = 1 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 3 (0128):	146.20	3.546	3.00	17.68
+ ID2= 2 (6102):	21.10	2.121	3.00	31.54

=====

ID = 1 (0128): 167.30 5.668 3.00 19.43

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0604) |

| IN= 2----> OUT= 1 |

Routing time step (min)'= 5.00

<----- DATA FOR SECTION (1414.9) ----->

Distance	Elevation	Manning
0.00	86.75	0.0900
3.09	87.40	0.0900
18.33	87.41	0.0900
35.33	86.99	0.0900
73.84	86.75	0.0900
103.33	86.41	0.0900
120.33	86.11	0.0900
129.46	86.13	0.0900
143.37	85.32	0.0900
154.33	85.02	0.0900
161.57	85.09	0.0900
163.05	84.78	0.0900 / 0.0700
166.55	83.78	0.0700
168.05	84.78	0.0700 / 0.1100
172.02	85.29	0.1100
191.39	86.19	0.1100
270.18	85.78	0.1100
296.33	86.36	0.1100
324.34	86.68	0.1100
368.56	87.05	0.1100

<----- TRAVEL TIME TABLE ----->

DEPTH (m)	ELEV (m)	VOLUME (cu.m.)	FLOW RATE (cms)	VELOCITY (m/s)	TRAV.TIME (min)
0.17	83.95	.465E+02	0.0	0.03	432.88
0.33	84.11	.186E+03	0.0	0.04	272.70
0.50	84.28	.418E+03	0.0	0.05	208.11

0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)= 88.14 74.55

over (min) 5.00 20.00

Storage Coeff. (min)= 6.17 (ii) 15.95 (ii)

Unit Hyd. Tpeak (min)= 5.00 20.00

Unit Hyd. peak (cms)= 0.19 0.07

TOTALS

PEAK FLOW (cms)= 3.75 0.55 4.133 (iii)

TIME TO PEAK (hrs)= 3.00 3.17 3.00

RUNOFF VOLUME (mm)= 50.50 26.16 42.95

TOTAL RAINFALL (mm)= 56.50 56.50 56.50

RUNOFF COEFFICIENT = 0.89 0.46 0.76

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 79.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

| ADD HYD (0130) |

| 1 + 2 = 3 |

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0604):	167.30	1.997	3.17	19.42
+ ID2= 2 (6042):	24.00	4.133	3.00	42.95

=====

ID = 3 (0130): 191.30 5.920 3.00 22.37

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

| ROUTE CHN(0605) |

| IN= 2----> OUT= 1 |

Routing time step (min)'= 5.00

0.67	84.45	.743E+03	0.1	0.06	171.79
0.83	84.61	.116E+04	0.1	0.08	148.04
1.00	84.78	.167E+04	0.2	0.09	131.10
1.20	84.98	.252E+04	0.4	0.10	110.62
1.41	85.19	.469E+04	0.6	0.09	121.59
1.61	85.39	.842E+04	1.1	0.09	126.63
1.81	85.59	.133E+05	1.8	0.09	121.99
2.01	85.79	.192E+05	2.7	0.10	116.68
2.22	86.00	.298E+05	4.0	0.09	125.45
2.42	86.20	.487E+05	5.6	0.08	143.80
2.62	86.40	.736E+05	9.0	0.08	137.02
2.82	86.60	.102E+06	13.1	0.09	130.82
3.03	86.81	.136E+06	18.1	0.09	125.42
3.23	87.01	.178E+06	24.4	0.09	121.07
3.43	87.21	.224E+06	34.2	0.10	108.80
3.63	87.41	.271E+06	44.8	0.11	100.89

<---- hydrograph ----> <-pipe / channel->

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)	MAX DEPTH (m)	MAX VEL (m/s)
INFLOW : ID= 2 (0128)	167.30	5.67	3.00	19.43	2.42	0.08
OUTFLOW: ID= 1 (0604)	167.30	2.00	3.17	19.42	1.85	0.09

**** WARNING: COMPUTATIONS FAILED TO CONVERGE.

| CALIB |

| STANDHYD (6042) |

| ID= 1 DT= 5.0 min |

Area (ha)=	24.00
Total Imp(%)=	78.00
Dir. Conn.(%)=	69.00

	IMPERVIOUS	PERVIOUS (i)
Surface Area (ha)=	18.72	5.28
Dep. Storage (mm)=	6.00	8.00
Average Slope (%)=	1.00	1.00
Length (m)=	400.00	40.00
Mannings n =	0.013	0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39

OUTFLOW: ID= 1 (0605) 191.30 2.62 3.50 22.37 0.87 0.28

RUNOFF VOLUME (mm)= 50.50 22.66 39.92
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.40 0.71

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 75.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0139)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0605): 191.30 2.622 3.50 22.37
+ ID2= 2 (6112): 11.40 1.835 3.00 39.92
===== ID = 3 (0139): 202.70 3.745 3.00 23.35

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (6052)
ID= 1 DT= 5.0 min
Area (ha)= 15.90
Total Imp(%)= 74.00 Dir. Conn.(%)= 65.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 11.77 4.13
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 325.58 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 52.52
over (min) 5.00 20.00
Storage Coeff. (min)= 4.94 (ii) 16.18 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.22 0.06
TOTALS
PEAK FLOW (cms)= 1.65 0.27 1.835 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00

0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 39.13
over (min) 5.00 20.00
Storage Coeff. (min)= 5.46 (ii) 18.10 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.20 0.06
TOTALS
PEAK FLOW (cms)= 2.38 0.25 2.545 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 17.30 38.88
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.31 0.69

- (i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0132)
1 + 2 = 3
AREA (ha) QPEAK (cms) TPEAK (hrs) R.V. (mm)
ID1= 1 (0139): 202.70 3.745 3.00 23.35
+ ID2= 2 (6052): 15.90 2.545 3.00 38.88
===== ID = 3 (0132): 218.60 6.290 3.00 24.48

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0530)
IN= 2---> OUT= 1
Routing time step (min)'= 5.00

----- DATA FOR SECTION (350.0) -----
Distance Elevation Manning

<----- TRAVEL TIME TABLE ----->

DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.13 78.76 .190E+03 0.1 0.19 38.41
0.26 78.89 .758E+03 0.5 0.31 24.20
0.43 79.05 .189E+04 2.1 0.50 14.77
0.59 79.22 .321E+04 4.7 0.65 11.35
0.76 79.39 .498E+04 8.2 0.73 10.10
0.93 79.55 .743E+04 13.1 0.78 9.48
1.09 79.72 .103E+05 19.5 0.84 8.84
1.26 79.89 .135E+05 27.1 0.89 8.29
1.43 80.05 .171E+05 36.3 0.94 7.85
1.59 80.22 .209E+05 47.2 1.00 7.39
1.76 80.39 .251E+05 59.8 1.06 6.99
1.93 80.56 .296E+05 73.5 1.10 6.70
2.10 80.72 .348E+05 87.6 1.12 6.61
2.26 80.89 .412E+05 102.8 1.11 6.68
2.43 81.06 .495E+05 122.0 1.09 6.77
2.60 81.22 .596E+05 146.2 1.09 6.80
2.76 81.39 .714E+05 176.9 1.10 6.72
2.93 81.56 .841E+05 215.0 1.13 6.52
3.10 81.72 .970E+05 256.7 1.18 6.30

<---- hydrograph ----> <-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0132) 218.60 6.29 3.00 24.48 0.67 0.69
OUTFLOW: ID= 1 (0530) 218.60 4.95 3.08 24.48 0.60 0.66

CALIB
STANDHYD (5302)
ID= 1 DT= 5.0 min

Area (ha)= 5.80
Total Imp(%)= 66.00 Dir. Conn.(%)= 56.00

IMPERVIOUS PERVIOUS (i)
Surface Area (ha)= 3.83 1.97
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 196.64 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 36.34
over (min)= 5.00 20.00
Storage Coeff. (min)= 4.03 (ii) 17.06 (ii)
Unit Hyd. Tpeak (min)= 5.00 20.00
Unit Hyd. peak (cms)= 0.24 0.06
TOTALS
PEAK FLOW (cms)= 0.77 0.11 0.847 (iii)
TIME TO PEAK (hrs)= 3.00 3.17 3.00
RUNOFF VOLUME (mm)= 50.50 16.72 35.64
TOTAL RAINFALL (mm)= 56.50 56.50 56.50

RUNOFF COEFFICIENT = 0.89 0.30 0.63

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0134)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0530): 218.60 4.951 3.08 24.48
+ ID2= 2 (5302): 5.80 0.847 3.00 35.64
===== ID = 3 (0134): 224.40 5.351 3.08 24.77

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ADD HYD (0135)
1 + 2 = 3
AREA QPEAK TPEAK R.V.
(ha) (cms) (hrs) (mm)
ID1= 1 (0120): 273.80 11.063 3.00 26.62
+ ID2= 2 (0134): 224.40 5.351 3.08 24.77
===== ID = 3 (0135): 498.20 16.405 3.00 25.79

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

ROUTE CHN(0507)
IN= 2----> OUT= 1
Routing time step (min)= 5.00

----- DATA FOR SECTION (40.0) -----
Distance Elevation Manning
0.00 79.36 0.0900
7.45 79.32 0.0900
13.77 79.27 0.0900
20.24 79.24 0.0900
27.28 79.26 0.0900
34.16 79.13 0.0900
40.79 79.05 0.0900
47.58 79.05 0.0900
54.30 79.07 0.0900

60.87 79.24 0.0900
71.39 79.48 0.0900
73.53 78.96 0.0900
76.96 78.07 0.0900
82.21 77.08 0.0900 / 0.0700 Main Channel
85.82 76.28 0.0700 Main Channel
89.97 76.89 0.0700 Main Channel
91.35 77.38 0.0700 / 0.0900 Main Channel
95.27 78.68 0.0900
98.44 79.63 0.0900
102.89 79.89 0.0900

----- TRAVEL TIME TABLE -----
DEPTH ELEV VOLUME FLOW RATE VELOCITY TRAV.TIME
(m) (m) (cu.m.) (cms) (m/s) (min)
0.16 76.44 .113E+03 0.0 0.14 88.10
0.32 76.60 .451E+03 0.1 0.23 55.50
0.49 76.76 .101E+04 0.4 0.30 42.35
0.65 76.92 .180E+04 0.9 0.37 34.57
0.81 77.09 .276E+04 1.6 0.44 28.86
0.97 77.25 .388E+04 2.7 0.52 24.37
1.14 77.41 .516E+04 4.0 0.59 21.56
1.30 77.57 .660E+04 5.7 0.66 19.26
1.46 77.74 .822E+04 7.8 0.72 17.67
1.62 77.90 .100E+05 10.1 0.77 16.48
1.79 78.06 .120E+05 12.8 0.82 15.54
1.95 78.22 .141E+05 15.9 0.87 14.74
2.11 78.39 .163E+05 19.4 0.91 14.06
2.27 78.55 .187E+05 23.2 0.95 13.47
2.44 78.71 .212E+05 27.3 0.99 12.95
2.60 78.87 .239E+05 31.9 1.02 12.50
2.76 79.04 .267E+05 36.8 1.06 12.10
2.92 79.20 .320E+05 39.4 0.94 13.56
3.09 79.36 .409E+05 45.7 0.85 14.94

----- hydrograph -----<-pipe / channel->
AREA QPEAK TPEAK R.V. MAX DEPTH MAX VEL
(ha) (cms) (hrs) (mm) (m) (m/s)
INFLOW : ID= 2 (0135) 498.20 16.41 3.00 25.79 1.97 0.87
OUTFLOW: ID= 1 (0507) 498.20 13.30 3.33 25.79 1.81 0.83

CALIB
STANDHYD (5072)
ID= 1 DT= 5.0 min

Area (ha)= 48.90
Total Imp(%)= 50.00 Dir. Conn.(%)= 36.00

IMPERVIOUS PERVIOUS (i)

Surface Area (ha)= 24.45 24.45
Dep. Storage (mm)= 6.00 8.00
Average Slope (%)= 1.00 1.00
Length (m)= 570.96 40.00
Mannings n = 0.013 0.250

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

----- TRANSFORMED HYETOGRAPH -----
TIME RAIN TIME RAIN TIME RAIN TIME RAIN
hrs mm/hr hrs mm/hr ' hrs mm/hr hrs mm/hr
0.083 2.26 1.583 5.65 3.083 12.43 4.58 3.39
0.167 2.26 1.667 5.65 3.167 12.43 4.67 3.39
0.250 2.26 1.750 5.65 3.250 12.43 4.75 3.39
0.333 2.26 1.833 5.65 3.333 12.43 4.83 3.39
0.417 2.26 1.917 5.65 3.417 12.43 4.92 3.39
0.500 2.26 2.000 5.65 3.500 12.43 5.00 3.39
0.583 3.39 2.083 6.78 3.583 5.65 5.08 2.26
0.667 3.39 2.167 6.78 3.667 5.65 5.17 2.26
0.750 3.39 2.250 6.78 3.750 5.65 5.25 2.26
0.833 3.39 2.333 6.78 3.833 5.65 5.33 2.26
0.917 3.39 2.417 6.78 3.917 5.65 5.42 2.26
1.000 3.39 2.500 6.78 4.000 5.65 5.50 2.26
1.083 3.39 2.583 33.90 4.083 4.52 5.58 2.26
1.167 3.39 2.667 33.90 4.167 4.52 5.67 2.26
1.250 3.39 2.750 61.02 4.250 4.52 5.75 2.26
1.333 3.39 2.833 61.02 4.333 4.52 5.83 2.26
1.417 3.39 2.917 88.14 4.417 4.52 5.92 2.26
1.500 3.39 3.000 88.14 4.500 4.52 6.00 2.26

Max.Eff.Inten.(mm/hr)= 88.14 45.91
over (min)= 10.00 20.00
Storage Coeff. (min)= 7.64 (ii) 19.51 (ii)
Unit Hyd. Tpeak (min)= 10.00 20.00
Unit Hyd. peak (cms)= 0.13 0.06
TOTALS
PEAK FLOW (cms)= 3.56 1.66 4.659 (iii)
TIME TO PEAK (hrs)= 3.00 3.25 3.00
RUNOFF VOLUME (mm)= 50.50 21.05 31.65
TOTAL RAINFALL (mm)= 56.50 56.50 56.50
RUNOFF COEFFICIENT = 0.89 0.37 0.56

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 74.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

ADD HYD (0122)
1 + 2 = 3

	AREA (ha)	QPEAK (cms)	TPEAK (hrs)	R.V. (mm)
ID1= 1 (0507):	498.20	13.299	3.33	25.79
+ ID2= 2 (5072):	48.90	4.659	3.00	31.65
=====				
ID = 3 (0122):	547.10	16.503	3.17	26.31

NOTE: PEAK FLOWS DO NOT INCLUDE BASEFLOWS IF ANY.

CALIB
STANDHYD (5402)
ID= 1 DT= 5.0 min

Area (ha)= 9.40
Total Imp(%)= 50.00 Dir. Conn.(%)= 35.00

	IMPERVIOUS (ha)=	PERVIOUS (i) (mm)=
Surface Area	4.70	8.00
Dep. Storage	6.00	1.00
Average Slope	1.00	40.00
Length	250.33	0.250
Mannings n	0.013	

NOTE: RAINFALL WAS TRANSFORMED TO 5.0 MIN. TIME STEP.

---- TRANSFORMED HYETOGRAPH ----

TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr	TIME hrs	RAIN mm/hr
0.083	2.26	1.583	5.65	3.083	12.43	4.58	3.39
0.167	2.26	1.667	5.65	3.167	12.43	4.67	3.39
0.250	2.26	1.750	5.65	3.250	12.43	4.75	3.39
0.333	2.26	1.833	5.65	3.333	12.43	4.83	3.39
0.417	2.26	1.917	5.65	3.417	12.43	4.92	3.39
0.500	2.26	2.000	5.65	3.500	12.43	5.00	3.39
0.583	3.39	2.083	6.78	3.583	5.65	5.08	2.26
0.667	3.39	2.167	6.78	3.667	5.65	5.17	2.26
0.750	3.39	2.250	6.78	3.750	5.65	5.25	2.26
0.833	3.39	2.333	6.78	3.833	5.65	5.33	2.26
0.917	3.39	2.417	6.78	3.917	5.65	5.42	2.26
1.000	3.39	2.500	6.78	4.000	5.65	5.50	2.26
1.083	3.39	2.583	33.90	4.083	4.52	5.58	2.26
1.167	3.39	2.667	33.90	4.167	4.52	5.67	2.26
1.250	3.39	2.750	61.02	4.250	4.52	5.75	2.26
1.333	3.39	2.833	61.02	4.333	4.52	5.83	2.26
1.417	3.39	2.917	88.14	4.417	4.52	5.92	2.26
1.500	3.39	3.000	88.14	4.500	4.52	6.00	2.26

Max.Eff.Inten.(mm/hr)=	88.14	36.65	
over (min)	5.00	20.00	
Storage Coeff. (min)=	4.66 (ii)	17.64 (ii)	
Unit Hyd. Tpeak (min)=	5.00	20.00	
Unit Hyd. peak (cms)=	0.22	0.06	
PEAK FLOW (cms)=	0.77	0.26	*TOTALS* (iii)
TIME TO PEAK (hrs)=	3.00	3.25	3.00
RUNOFF VOLUME (mm)=	50.50	16.79	28.58
TOTAL RAINFALL (mm)=	56.50	56.50	56.50
RUNOFF COEFFICIENT =	0.89	0.30	0.51

***** WARNING: STORAGE COEFF. IS SMALLER THAN TIME STEP!

(i) CN PROCEDURE SELECTED FOR PERVIOUS LOSSES:
CN* = 66.0 Ia = Dep. Storage (Above)
(ii) TIME STEP (DT) SHOULD BE SMALLER OR EQUAL
THAN THE STORAGE COEFFICIENT.
(iii) PEAK FLOW DOES NOT INCLUDE BASEFLOW IF ANY.

STORE HYD(1505)
ID= 1 DT= 5.0min

AREA (ha)=	QPEAK (cms)=	TPEAK (hrs)=	VOLUME (mm)=
30.00	0.78	15.58	402.14

TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms	TIME hrs	FLOW cms
0.00	0.00	31.33	0.10	62.67	0.25	94.00	0.26	125.33	0.16
0.08	0.00	31.42	0.10	62.75	0.25	94.08	0.26	125.42	0.16
0.17	0.00	31.50	0.10	62.83	0.25	94.17	0.25	125.50	0.16
0.25	0.00	31.58	0.10	62.92	0.25	94.25	0.25	125.58	0.16
0.33	0.00	31.67	0.10	63.00	0.25	94.33	0.25	125.67	0.17
0.42	0.00	31.75	0.10	63.08	0.25	94.42	0.25	125.75	0.16
0.50	0.00	31.83	0.10	63.17	0.25	94.50	0.25	125.83	0.16
0.58	0.00	31.92	0.10	63.25	0.24	94.58	0.25	125.92	0.17
0.67	0.00	32.00	0.10	63.33	0.24	94.67	0.24	126.00	0.15
0.75	0.00	32.08	0.10	63.42	0.24	94.75	0.25	126.08	0.16
0.83	0.00	32.17	0.10	63.50	0.23	94.83	0.24	126.17	0.16
0.92	0.00	32.25	0.10	63.58	0.24	94.92	0.25	126.25	0.16
1.00	0.00	32.33	0.10	63.67	0.24	95.00	0.25	126.33	0.16
1.08	0.00	32.42	0.10	63.75	0.24	95.08	0.25	126.42	0.16
1.17	0.00	32.50	0.10	63.83	0.23	95.17	0.24	126.50	0.17
1.25	0.00	32.58	0.10	63.92	0.23	95.25	0.21	126.58	0.16
1.33	0.00	32.67	0.10	64.00	0.23	95.33	0.25	126.67	0.16
1.42	0.00	32.75	0.10	64.08	0.23	95.42	0.22	126.75	0.17
1.50	0.00	32.83	0.10	64.17	0.23	95.50	0.23	126.83	0.17
1.58	0.00	32.92	0.10	64.25	0.24	95.58	0.22	126.92	0.17
1.67	0.00	33.00	0.10	64.33	0.23	95.67	0.24	127.00	0.17

1.75	0.00	33.08	0.10	64.42	0.23	95.75	0.26	127.08	0.17
1.83	0.00	33.17	0.10	64.50	0.23	95.83	0.24	127.17	0.18
1.92	0.00	33.25	0.11	64.58	0.23	95.92	0.23	127.25	0.17
2.00	0.00	33.33	0.11	64.67	0.24	96.00	0.24	127.33	0.18
2.08	0.00	33.42	0.11	64.75	0.24	96.08	0.24	127.42	0.18
2.17	0.00	33.50	0.11	64.83	0.24	96.17	0.24	127.50	0.16
2.25	0.00	33.58	0.11	64.92	0.24	96.25	0.24	127.58	0.18
2.33	0.00	33.67	0.11	65.00	0.24	96.33	0.24	127.67	0.17
2.42	0.00	33.75	0.11	65.08	0.23	96.42	0.24	127.75	0.18
2.50	0.00	33.83	0.11	65.17	0.23	96.50	0.24	127.83	0.17
2.58	0.00	33.92	0.11	65.25	0.23	96.58	0.23	127.92	0.17
2.67	0.00	34.00	0.11	65.33	0.23	96.67	0.24	128.00	0.17
2.75	0.00	34.08	0.11	65.42	0.22	96.75	0.23	128.08	0.17
2.83	0.00	34.17	0.11	65.50	0.22	96.83	0.23	128.17	0.17
2.92	0.00	34.25	0.11	65.58	0.22	96.92	0.24	128.25	0.18
3.00	0.00	34.33	0.11	65.67	0.22	97.00	0.23	128.33	0.18
3.08	0.00	34.42	0.11	65.75	0.22	97.08	0.22	128.42	0.19
3.17	0.00	34.50	0.11	65.83	0.22	97.17	0.23	128.50	0.18
3.25	0.00	34.58	0.11	65.92	0.21	97.25	0.22	128.58	0.17
3.33	0.00	34.67	0.11	66.00	0.21	97.33	0.25	128.67	0.18
3.42	0.00	34.75	0.11	66.08	0.21	97.42	0.22	128.75	0.18
3.50	0.00	34.83	0.11	66.17	0.20	97.50	0.24	128.83	0.18
3.58	0.00	34.92	0.11	66.25	0.20	97.58	0.23	128.92	0.18
3.67	0.00	35.00	0.11	66.33	0.20	97.67	0.22	129.00	0.18
3.75	0.00	35.08	0.11	66.42	0.20	97.75	0.23	129.08	0.19
3.83	0.00	35.17	0.11	66.50	0.19	97.83	0.22	129.17	0.17
3.92	0.00	35.25	0.11	66.58	0.20	97.92	0.21	129.25	0.17
4.00	0.00	35.33	0.11	66.67	0.20	98.00	0.22	129.33	0.17
4.08	0.00	35.42	0.11	66.75	0.20	98.08	0.23	129.42	0.18
4.17	0.00	35.50	0.11	66.83	0.19	98.17	0.21	129.50	0.18
4.25	0.00	35.58	0.11	66.92	0.19	98.25	0.21	129.58	0.18
4.33	0.00	35.67	0.11	67.00	0.20	98.33	0.23	129.67	0.18
4.42	0.00	35.75	0.11	67.08	0.20	98.42	0.21	129.75	0.18
4.50	0.00	35.83	0.11	67.17	0.20	98.50	0.21	129.83	0.18
4.58	0.00	35.92	0.11	67.25	0.20	98.58	0.23	129.92	0.18
4.67	0.00	36.00	0.11	67.33	0.20	98.67	0.22	130.00	0.18
4.75	0.00	36.08	0.11	67.42	0.21	98.75	0.23	130.08	0.17
4.83	0.00	36.17	0.11	67.50	0.22	98.83	0.24	130.17	0.17
4.92	0.00	36.25	0.11	67.58	0.22	98.92	0.22	130.25	0.17
5.00	0.00	36.33	0.11	67.67	0.23	99.00	0.20	130.33	0.17
5.08	0.00	36.42	0.12	67.75	0.24	99.08	0.20	130.42	0.18
5.17	0.00	36.50	0.12	67.83	0.26	99.17	0.22	130.50	0.18
5.25	0.00	36.58	0.12	67.92	0.27	99.25	0.21	130.58	0.18
5.33	0.00	36.67	0.12	68.00	0.28	99.33	0.22	130.67	0.17
5.42	0.00	36.75	0.12	68.08	0.31	99.42	0.21	130.75	0.17
5.50	0.00	36.83	0.12	68.17	0.32	99.50	0.20	130.83	0.18
5.58	0.00	36.92	0.12	68.25	0.34	99.58	0.21	130.92	0.17
5.67	0.00	37.00	0.12	68.33	0.35	99.67	0.20	131.00	0.17
5.75	0.00	37.08	0.12	68.42	0.38	99.75	0.19	131.08	0.17
5.83	0.00	37.17	0.12	68.50	0.39	99.83	0.20	131.17	0.18

5.92	0.00	37.25	0.12	68.58	0.40	99.92	0.22	131.25	0.18
6.00	0.00	37.33	0.12	68.67	0.42	100.00	0.21	131.33	0.17
6.08	0.00	37.42	0.12	68.75	0.44	100.08	0.20	131.42	0.17
6.17	0.00	37.50	0.12	68.83	0.46	100.17	0.21	131.50	0.17
6.25	0.00	37.58	0.12	68.92	0.49	100.25	0.19	131.58	0.17
6.33	0.00	37.67	0.13	69.00	0.51	100.33	0.19	131.67	0.17
6.42	0.00	37.75	0.12	69.08	0.54	100.42	0.19	131.75	0.17
6.50	0.00	37.83	0.12	69.17	0.56	100.50	0.19	131.83	0.17
6.58	0.00	37.92	0.12	69.25	0.60	100.58	0.19	131.92	0.17
6.67	0.00	38.00	0.12	69.33	0.64	100.67	0.19	132.00	0.16
6.75	0.00	38.08	0.12	69.42	0.67	100.75	0.21	132.08	0.17
6.83	0.00	38.17	0.12	69.50	0.67	100.83	0.19	132.17	0.17
6.92	0.00	38.25	0.12	69.58	0.68	100.92	0.19	132.25	0.17
7.00	0.00	38.33	0.12	69.67	0.65	101.00	0.19	132.33	0.17
7.08	0.00	38.42	0.12	69.75	0.66	101.08	0.19	132.42	0.18
7.17	0.00	38.50	0.12	69.83	0.66	101.17	0.20	132.50	0.17
7.25	0.00	38.58	0.12	69.92	0.67	101.25	0.19	132.58	0.16
7.33	0.00	38.67	0.13	70.00	0.66	101.33	0.18	132.67	0.17
7.42	0.00	38.75	0.13	70.08	0.67	101.42	0.19	132.75	0.17
7.50	0.00	38.83	0.13	70.17	0.67	101.50	0.19	132.83	0.17
7.58	0.00	38.92	0.13						

10.08	0.00	41.42	0.22	72.75	0.68	104.08	0.18	135.42	0.15
10.17	0.00	41.50	0.23	72.83	0.67	104.17	0.18	135.50	0.15
10.25	0.00	41.58	0.23	72.92	0.66	104.25	0.17	135.58	0.15
10.33	0.00	41.67	0.23	73.00	0.64	104.33	0.17	135.67	0.14
10.42	0.00	41.75	0.24	73.08	0.63	104.42	0.17	135.75	0.15
10.50	0.00	41.83	0.25	73.17	0.63	104.50	0.18	135.83	0.16
10.58	0.00	41.92	0.25	73.25	0.61	104.58	0.17	135.92	0.15
10.67	0.00	42.00	0.26	73.33	0.62	104.67	0.16	136.00	0.15
10.75	0.00	42.08	0.25	73.42	0.61	104.75	0.16	136.08	0.15
10.83	0.00	42.17	0.26	73.50	0.62	104.83	0.18	136.17	0.15
10.92	0.00	42.25	0.26	73.58	0.60	104.92	0.16	136.25	0.15
11.00	0.00	42.33	0.26	73.67	0.62	105.00	0.17	136.33	0.15
11.08	0.00	42.42	0.26	73.75	0.58	105.08	0.16	136.42	0.15
11.17	0.00	42.50	0.26	73.83	0.59	105.17	0.16	136.50	0.15
11.25	0.00	42.58	0.26	73.92	0.57	105.25	0.16	136.58	0.15
11.33	0.00	42.67	0.26	74.00	0.57	105.33	0.16	136.67	0.14
11.42	0.00	42.75	0.25	74.08	0.57	105.42	0.16	136.75	0.15
11.50	0.00	42.83	0.26	74.17	0.56	105.50	0.16	136.83	0.14
11.58	0.00	42.92	0.25	74.25	0.58	105.58	0.16	136.92	0.14
11.67	0.00	43.00	0.25	74.33	0.58	105.67	0.16	137.00	0.14
11.75	0.00	43.08	0.25	74.42	0.58	105.75	0.17	137.08	0.15
11.83	0.00	43.17	0.25	74.50	0.59	105.83	0.16	137.17	0.14
11.92	0.00	43.25	0.25	74.58	0.60	105.92	0.16	137.25	0.15
12.00	0.00	43.33	0.25	74.67	0.57	106.00	0.16	137.33	0.15
12.08	0.00	43.42	0.25	74.75	0.56	106.08	0.16	137.42	0.14
12.17	0.00	43.50	0.25	74.83	0.54	106.17	0.16	137.50	0.14
12.25	0.00	43.58	0.25	74.92	0.56	106.25	0.17	137.58	0.14
12.33	0.00	43.67	0.25	75.00	0.53	106.33	0.16	137.67	0.15
12.42	0.00	43.75	0.25	75.08	0.51	106.42	0.16	137.75	0.14
12.50	0.00	43.83	0.26	75.17	0.51	106.50	0.16	137.83	0.14
12.58	0.00	43.92	0.26	75.25	0.51	106.58	0.16	137.92	0.14
12.67	0.00	44.00	0.26	75.33	0.51	106.67	0.16	138.00	0.14
12.75	0.00	44.08	0.26	75.42	0.50	106.75	0.16	138.08	0.14
12.83	0.00	44.17	0.26	75.50	0.50	106.83	0.15	138.17	0.14
12.92	0.00	44.25	0.27	75.58	0.49	106.92	0.15	138.25	0.14
13.00	0.00	44.33	0.26	75.67	0.49	107.00	0.16	138.33	0.14
13.08	0.00	44.42	0.26	75.75	0.49	107.08	0.16	138.42	0.14
13.17	0.00	44.50	0.26	75.83	0.48	107.17	0.16	138.50	0.14
13.25	0.00	44.58	0.26	75.92	0.47	107.25	0.15	138.58	0.14
13.33	0.00	44.67	0.26	76.00	0.47	107.33	0.16	138.67	0.14
13.42	0.00	44.75	0.26	76.08	0.48	107.42	0.16	138.75	0.14
13.50	0.00	44.83	0.26	76.17	0.46	107.50	0.15	138.83	0.14
13.58	0.00	44.92	0.26	76.25	0.45	107.58	0.16	138.92	0.14
13.67	0.00	45.00	0.26	76.33	0.45	107.67	0.15	139.00	0.14
13.75	0.00	45.08	0.26	76.42	0.43	107.75	0.15	139.08	0.14
13.83	0.00	45.17	0.25	76.50	0.44	107.83	0.16	139.17	0.13
13.92	0.00	45.25	0.25	76.58	0.46	107.92	0.16	139.25	0.14
14.00	0.00	45.33	0.25	76.67	0.43	108.00	0.16	139.33	0.14
14.08	0.00	45.42	0.25	76.75	0.44	108.08	0.15	139.42	0.14
14.17	0.00	45.50	0.25	76.83	0.43	108.17	0.15	139.50	0.14

14.25	0.00	45.58	0.25	76.92	0.45	108.25	0.15	139.58	0.13
14.33	0.00	45.67	0.25	77.00	0.42	108.33	0.16	139.67	0.14
14.42	0.00	45.75	0.25	77.08	0.43	108.42	0.16	139.75	0.14
14.50	0.00	45.83	0.26	77.17	0.43	108.50	0.15	139.83	0.13
14.58	0.00	45.92	0.25	77.25	0.42	108.58	0.15	139.92	0.14
14.67	0.00	46.00	0.26	77.33	0.41	108.67	0.15	140.00	0.14
14.75	0.00	46.08	0.26	77.42	0.43	108.75	0.16	140.08	0.13
14.83	0.00	46.17	0.25	77.50	0.41	108.83	0.15	140.17	0.13
14.92	0.69	46.25	0.26	77.58	0.43	108.92	0.15	140.25	0.13
15.00	0.69	46.33	0.26	77.67	0.39	109.00	0.15	140.33	0.13
15.08	0.71	46.42	0.26	77.75	0.39	109.08	0.15	140.42	0.14
15.17	0.74	46.50	0.26	77.83	0.37	109.17	0.15	140.50	0.13
15.25	0.74	46.58	0.26	77.92	0.39	109.25	0.15	140.58	0.13
15.33	0.74	46.67	0.26	78.00	0.39	109.33	0.14	140.67	0.13
15.42	0.77	46.75	0.26	78.08	0.39	109.42	0.15	140.75	0.13
15.50	0.76	46.83	0.25	78.17	0.37	109.50	0.15	140.83	0.13
15.58	0.78	46.92	0.25	78.25	0.36	109.58	0.14	140.92	0.13
15.67	0.78	47.00	0.25	78.33	0.37	109.67	0.15	141.00	0.13
15.75	0.77	47.08	0.25	78.42	0.38	109.75	0.14	141.08	0.13
15.83	0.77	47.17	0.26	78.50	0.36	109.83	0.15	141.17	0.13
15.92	0.77	47.25	0.26	78.58	0.36	109.92	0.14	141.25	0.13
16.00	0.76	47.33	0.26	78.67	0.36	110.00	0.14	141.33	0.13
16.08	0.74	47.42	0.26	78.75	0.37	110.08	0.14	141.42	0.13
16.17	0.74	47.50	0.26	78.83	0.34	110.17	0.14	141.50	0.13
16.25	0.74	47.58	0.25	78.92	0.35	110.25	0.14	141.58	0.13
16.33	0.72	47.67	0.26	79.00	0.36	110.33	0.15	141.67	0.13
16.42	0.69	47.75	0.26	79.08	0.35	110.42	0.15	141.75	0.13
16.50	0.69	47.83	0.26	79.17	0.35	110.50	0.14	141.83	0.13
16.58	0.67	47.92	0.26	79.25	0.36	110.58	0.14	141.92	0.13
16.67	0.66	48.00	0.25	79.33	0.36	110.67	0.14	142.00	0.13
16.75	0.64	48.08	0.25	79.42	0.33	110.75	0.15	142.08	0.12
16.83	0.63	48.17	0.26	79.50	0.33	110.83	0.14	142.17	0.13
16.92	0.63	48.25	0.25	79.58	0.33	110.92	0.15	142.25	0.13
17.00	0.60	48.33	0.25	79.67	0.32	111.00	0.15	142.33	0.13
17.08	0.58	48.42	0.25	79.75	0.33	111.08	0.14	142.42	0.12
17.17	0.58	48.50	0.25	79.83	0.33	111.17	0.14	142.50	0.13
17.25	0.57	48.58	0.25	79.92	0.32	111.25	0.14	142.58	0.13
17.33	0.56	48.67	0.24	80.00	0.33	111.33	0.15	142.67	0.13
17.42	0.55	48.75	0.24	80.08	0.34	111.42	0.14	142.75	0.13
17.50	0.54	48.83	0.24	80.17	0.32	111.50	0.15	142.83	0.12
17.58	0.51	48.92	0.24	80.25	0.31	111.58	0.14	142.92	0.13
17.67	0.50	49.00	0.24	80.33	0.33	111.67	0.14	143.00	0.12
17.75	0.48	49.08	0.25	80.42	0.31	111.75	0.14	143.08	0.12
17.83	0.47	49.17	0.24	80.50	0.32	111.83	0.14	143.17	0.12
17.92	0.47	49.25	0.24	80.58	0.31	111.92	0.14	143.25	0.12
18.00	0.45	49.33	0.24	80.67	0.31	112.00	0.15	143.33	0.12
18.08	0.44	49.42	0.23	80.75	0.33	112.08	0.15	143.42	0.12
18.17	0.41	49.50	0.23	80.83	0.31	112.17	0.14	143.50	0.12
18.25	0.42	49.58	0.24	80.92	0.32	112.25	0.14	143.58	0.12
18.33	0.40	49.67	0.23	81.00	0.32	112.33	0.14	143.67	0.12

18.42	0.39	49.1	0.24	81.08	0.31	112.42	0.15	143.75	0.12
18.50	0.38	49.83	0.24	81.17	0.31	112.50	0.15	143.83	0.12
18.58	0.38	49.92	0.23	81.25	0.31	112.58	0.15	143.92	0.12
18.67	0.37	50.00	0.23	81.33	0.31	112.67	0.15	144.00	0.12
18.75	0.37	50.08	0.23	81.42	0.31	112.75	0.14	144.08	0.12
18.83	0.36	50.17	0.24	81.50	0.32	112.83	0.15	144.17	0.12
18.92	0.35	50.25	0.23	81.58	0.32	112.92	0.14	144.25	0.12
19.00	0.34	50.33	0.23	81.67	0.34	113.00	0.15	144.33	0.12
19.08	0.34	50.42	0.23	81.75	0.34	113.08	0.15	144.42	0.12
19.17	0.34	50.50	0.23	81.83	0.35	113.17	0.14	144.50	0.12
19.25	0.34	50.58	0.23	81.92	0.37	113.25	0.15	144.58	0.12
19.33	0.33	50.67	0.23	82.00	0.36	113.33	0.15	144.67	0.12
19.42	0.33	50.75	0.23	82.08	0.37	113.42	0.14	144.75	0.12
19.50	0.32	50.83	0.23	82.17	0.38	113.50	0.14	144.83	0.12
19.58	0.32	50.92	0.23	82.25	0.36	113.58	0.14	144.92	0.12
19.67	0.32	51.00	0.23	82.33	0.35	113.67	0.14	145.00	0.12
19.75	0.31	51.08	0.23	82.42	0.37	113.75	0.14	145.08	0.12
19.83	0.30	51.17	0.23	82.50	0.37	113.83	0.14	145.17	0.12
19.92	0.30	51.25	0.23	82.58	0.36	113.92	0.14	145.25	0.12
20.00	0.29	51.33	0.23	82.67	0.38	114.00	0.14	145.33	0.12
20.08	0.29	51.42	0.23	82.75	0.38	114.08	0.14	145.42	0.12
20.17	0.28	51.50	0.23	82.83	0.41	114.17	0.14	145.50	0.12
20.25	0.28	51.58	0.23	82.92	0.40	114.25	0.14	145.58	0.12
20.33	0.28	51.67	0.23	83.00	0.40	114.33	0.14	145.67	0.12
20.42	0.27	51.75	0.23	83.08	0.40	114.42	0.14	145.75	0.12
20.50	0.27	51.83	0.23	83.17	0.44	114.50	0.15	145.83	0.12
20.58	0.26	51.92	0.23	83.25	0.44	114.58	0.14	145.92	0.12
20.67	0.27	52.00	0.23	83.33	0.42	114.67	0.14	146.00	0.12
20.75	0.26	52.08	0.24	83.42	0.42	114.75	0.14	146.08	0.11
20.83	0.26	52.17	0.24	83.50	0.42	114.83	0.15	146.17	0.11
20.92	0.25	52.25	0.24	83.58	0.41	114.92	0.14	146.25	0.11
21.00	0.25	52.33	0.25	83.67	0.41	115.00	0.15	146.33	0.12
21.08	0.25	52.42	0.25	83.75	0.42	115.08	0.14	146.42	0.11
21.17	0.24	52.50	0.25	83.83	0.41	115.17	0.14	146.50	0.12
21.25	0.25	52.58	0.25	83.92	0.41	115.25	0.14	146.58	0.12
21.33	0.24	52.67	0.25	84.00	0.43	115.33	0.15	146.67	0.11
21.42	0.24	52.75	0.25	84.08	0.40	115.42	0.14	146.75	0.12
21.50	0.24	52.83	0.25	84.17	0.42	115.50	0.15	146.83	0.11
21.58	0.23	52.92	0.25	84.25	0.41	115.58	0.14	146.92	0.12
21.67	0.23	53.00	0.27	84.33	0.42	115.67	0.14	147.00	0.11
21.75	0.23	53.08	0.27	84.42	0.42	115.75	0.14	147.08	0.12
21.83	0.23	53.17	0.28	84.50	0.43	115.83	0.14	147.17	0.11
21.92	0.23	53.25	0.28	84.58	0.44	115.92	0.14	147.25	0.12
22.00	0.23	53.33	0.28	84.67	0.42	116.00	0.15	147.33	0.12
22.08	0.22	53.42	0.28	84.75	0.44	116.08	0.14	147.42	0.11
22.17	0.22	53.50	0.28	84.83	0.45	116.17	0.15	147.50	0.11
22.25	0.22	53.58	0.29	84.92	0.45	116.25	0.14	147.58	0.11
22.33	0.22	53.67	0.29	85.00	0.46	116.33	0.14	147.67	0.11
22.42	0.21	53.75	0.29	85.08	0.47	116.42	0.14	147.75	0.11
22.50	0.21	53.83	0.30	85.17	0.46	116.50	0.14	147.83	0.11

22.68	0.21	53.92	0.30	85.25	0.46	116.58	0.14	147.92	0.11
22.77	0.21	54.00	0.30	85.33	0.44	116.67	0.14	148.00	0.11
22.75	0.21	54.08	0.30	85.42	0.45	116.75	0.14	148.08	0.11
22.83	0.20	54.17	0.31	85.50	0.45	116.83	0.14	148.17	0.11
22.92	0.20	54.25	0.30	85.58	0.45	116.92	0.14	148.25	0.11
23.00	0.20	54.33	0.31	85.67	0.45	117.00	0.14	148.33	0.11
23.08	0.20	54.42	0.30	85.75	0.46	117.08	0.14	148.42	0.11
23.17	0.20	54.50	0.31	85.83	0.45	117.17	0.14	148.50	0.11
23.25	0.20	54.58	0.32	85.92	0.47	117.25	0.14	148.58	0.11
23.33	0.19	54.67	0.32	86.00	0.44	117.33	0.14	148.67	0.11
23.42	0.19	54.75	0.32	86.08	0.45	117.42	0.14	148.75	0.11
23.50	0.19	54.83	0.32	86.17	0.43	117.50	0.14	148.83	0.11
23.58	0.19	54.92	0.32	86.25	0.43	117.58	0.14	148.92	0.11
23.67	0.19	55.00	0.32	86.33	0.43	117.67	0.13	149.00	0.11
23.75	0.18	55.08	0.32	86.42	0.43	117.75	0.13	149.08	0.11
23.83	0.18	55.17	0.32	86.50	0.45	117.83	0.14	149.17	0.11
23.92	0.18	55.25	0.33	86.58	0.42	117.92	0.13	149.25	0.11
24.00	0.18	55.33	0.33	86.67	0.42	118.00	0.13	149.33	0.11
24.08	0.18	55.42	0.33	86.75	0.43	118.08	0.13	149.42	0.11
24.17	0.18	55.50	0.33	86.83	0.41	118.17	0.13	149.50	0.11
24.25	0.17	55.58	0.32	86.92	0.40	118.25	0.13	149.58	0.11
24.33	0.18	55.67	0.32	87.00	0.40	118.33	0.13	149.67	0.11
24.42	0.17	55.75	0.32	87.08	0.39	118.42	0.13	149.75	0.11
24.50	0.17	55.83	0.32	87.17	0.39	118.50	0.13	149.83	0.11
24.58	0.17	55.92	0.32	87.25	0.39	118.58	0.13	149.92	0.11
24.67	0.17	56.00	0.32	87.33	0.37	118.67	0.13	150.00	0.11
24.75	0.16	56.08	0.32	87.42	0.37	118.75	0.13	150.08	0.11
24.83	0.16	56.17	0.32	87.50	0.38	118.83	0.13	150.17	0.11
24.92	0.16	56.25	0.32	87.58	0.37	118.92	0.13	150.25	0.11
25.00	0.16	56.33	0.32	87.67	0.36	119.00	0.13	150.33	0.11
25.08	0.16	56.42	0.32	87.75	0.38	119.08	0.13	150.42	0.11
25.17	0.16	56.50	0.32	87.83	0.38	119.17	0.13	150.50	0.11
25.25	0.16	56.58	0.31	87.92	0.34	119.25	0.13	150.58	0.11
25.33	0.15	56.67	0.31	88.00	0.35	119.33	0.13	150.67	0.11
25.42	0.16	56.75	0.32	88.08	0.34	119.42	0.13	150.75	0.11
25.50	0.15	56.83	0.31	88.17	0.35	119.50	0.13	150.83	0.11
25.58	0.15	56.92	0.31	88.25	0.34	119.58	0.13	150.92	0.11
25.67	0.15	57.00	0.31	88.33	0.36	119.67	0.13	151.00	0.11
25.75	0.15	57.08	0.31	88.42	0.33	119.75	0.13	151.08	0.11
25.83	0.15	57.17	0.31	88.50	0.33	119.83	0.13	151.17	0.11
25.92	0.15	57.25	0.31	88.58	0.34	119.92	0.13	151.25	0.11
26.00	0.15	57.33	0.30	88.67	0.33	120.00	0.13	151.33	0.11
26.08	0.15	57.42	0.30	88.75	0.33	120.08	0.13	151.42	0.11
26.17	0.15	57.50	0.30	88.83	0.32	120.17	0.13	151.50	0.11
26.25	0.14	57.58	0.30	88.92	0.30	120.25	0.14	151.58	0.11
26.33	0.14	57.67	0.31	89.00	0.31	120.33	0.14	151.67	0.11
26.42	0.14	57.75	0.30	89.08	0.31	120.42	0.13	151.75	0.11
26.50	0.14	57.83	0.30	89.17	0.30	120.50	0.14	151.83	0.11
26.58	0.14	57.92	0.30	89.25	0.31	120.58	0.14	151.92	0.11
26.67	0.14	58.00	0.29	89.33	0.32	120.67	0.14	152.00	0.11

26.75	0.14	58.08	0.29	89.42	0.31	120.75	0.14	152.08	0.11
26.83	0.14	58.17	0.29	89.50	0.30	120.83	0.14	152.17	0.11
26.92	0.14	58.25	0.29	89.58	0.29	120.92	0.14	152.25	0.11
27.00	0.14	58.33	0.29	89.67	0.29	121.00	0.14	152.33	0.10
27.08	0.13	58.42	0.29	89.75	0.29	121.08	0.14	152.42	0.11
27.17	0.13	58.50	0.29	89.83	0.28	121.17	0.14	152.50	0.11
27.25	0.13	58.58	0.29	89.92	0.30	121.25	0.14	152.58	0.10
27.33	0.13	58.67	0.28	90.00	0.31	121.33	0.14	152.67	0.10
27.42	0.13	58.75	0.28	90.08	0.31	121.42	0.14	152.75	0.10
27.50	0.13	58.83	0.28	90.17	0.30	121.50	0.14	152.83	0.10
27.58	0.13	58.92	0.29	90.25	0.30	121.58	0.14	152.92	0.10
27.67	0.13	59.00	0.29	90.33	0.31	121.67	0.14	153.00	0.11
27.75	0.13	59.08	0.29	90.42	0.30	121.75	0.14	153.08	0.10
27.83	0.13	59.17	0.28	90.50	0.31	121.83	0.14	153.17	0.10
27.92	0.12	59.25	0.28	90.58	0.31	121.92	0.14	153.25	0.11
28.00	0.13	59.33	0.28	90.67	0.31	122.00	0.15	153.33	0.10
28.08	0.12	59.42	0.27	90.75	0.31	122.08	0.14	153.42	0.11
28.17	0.12	59.50	0.27	90.83	0.30	122.17	0.14	153.50	0.10
28.25	0.12	59.58	0.27	90.92	0.31	122.25	0.14	153.58	0.10
28.33	0.12	59.67	0.26	91.00	0.30	122.33	0.14	153.67	0.10
28.42	0.12	59.75	0.26	91.08	0.30	122.42	0.15	153.75	0.11
28.50	0.12	59.83	0.26	91.17	0.32	122.50	0.15	153.83	0.10
28.58	0.12	59.92	0.26	91.25	0.30	122.58	0.15	153.92	0.10
28.67	0.12	60.00	0.25	91.33	0.28	122.67	0.14	154.00	0.10
28.75	0.12	60.08	0.25	91.42	0.30	122.75	0.15	154.08	0.10
28.83	0.12	60.17	0.25	91.50	0.28	122.83	0.14	154.17	0.10
28.92	0.12	60.25	0.25	91.58	0.31	122.92	0.14	154.25	0.10
29.00	0.12	60.33	0.25	91.67	0.28	123.00	0.15	154.33	0.10
29.08	0.12	60.42	0.24	91.75	0.30	123.08	0.15	154.42	0.10
29.17	0.11	60.50	0.24	91.83	0.31	123.17	0.15	154.50	0.10
29.25	0.11	60.58	0.24	91.92	0.28	123.25	0.15	154.58	0.10
29.33	0.11	60.67	0.23	92.00	0.27	123.33	0.15	154.67	0.10
29.42	0.11	60.75	0.24	92.08	0.29	123.42	0.15	154.75	0.10
29.50	0.11	60.83	0.23	92.17	0.27	123.50	0.15	154.83	0.10
29.58	0.11	60.92	0.23	92.25	0.28	123.58	0.15	154.92	0.10
29.67	0.11	61.00	0.23	92.33	0.28	123.67	0.15	155.00	0.10
29.75	0.11	61.08	0.23	92.42	0.31	123.75	0.15	155.08	0.10
29.83	0.11	61.17	0.23	92.50	0.28	123.83	0.15	155.17	0.10
29.92	0.11	61.25	0.22	92.58	0.28	123.92	0.15	155.25	0.10
30.00	0.11	61.33	0.23	92.67	0.28	124.00	0.15	155.33	0.10
30.08	0.11	61.42	0.23	92.75	0.28	124.08	0.15	155.42	0.10
30.17	0.11	61.50	0.24	92.83	0.27	124.17	0.15	155.50	0.10
30.25	0.11	61.58	0.24	92.92	0.28	124.25	0.15	155.58	0.10
30.33	0.11	61.67	0.23	93.00	0.28	124.33	0.14	155.67	0.10
30.42	0.11	61.75	0.23	93.08	0.27	124.42	0.15	155.75	0.10
30.50	0.11	61.83	0.23	93.17	0.29	124.50	0.15	155.83	0.10
30.58	0.11	61.92	0.23	93.25	0.28	124.58	0.16	155.92	0.10
30.67	0.11	62.00	0.23	93.33	0.26	124.67	0.15	156.00	0.10
30.75	0.11	62.08	0.23	93.42	0.27	124.75	0.15	156.08	0.10
30.83	0.11	62.17	0.23	93.50	0.27	124.83	0.15	156.17	0.10

30.92	0.11	62.25	0.23	93.58	0.26	124.92	0.17	156.25	0.10
31.00	0.11	62.33	0.24	93.67	0.26	125.00	0.16		
31.08	0.10	62.42	0.25	93.75	0.28	125.08	0.16		
31.17	0.10	62.50	0.25	93.83	0.25	125.17	0.16		
31.25	0.10	62.58	0.26	93.92	0.28	125.25	0.16		

STORE HYD(1605)	AREA	(ha)=	30.00
ID= 1 DT= 5.0min	QPEAK	(cms)=	1.37
	TPEAK	(hrs)=	71.92
	VOLUME	(mm)=	625.27

TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW	TIME	FLOW
hrs	cms	hrs	cms	hrs	cms	hrs	cms	hrs	cms
0.00	0.00	31.25	0.15	62.50	0.38	93.75	0.37	125.00	0.20
0.08	0.00	31.33	0.15	62.58	0.38	93.83	0.36	125.08	0.20
0.17	0.00	31.42	0.15	62.67	0.38	93.92	0.36	125.17	0.20
0.25	0.00	31.50	0.15	62.75	0.38	94.00	0.36	125.25	0.20
0.33	0.00	31.58	0.15	62.83	0.38	94.08	0.36	125.33	0.20
0.42	0.00	31.67	0.15	62.92	0.38	94.17	0.36	125.42	0.20
0.50	0.00	31.75	0.15	63.00	0.37	94.25	0.36	125.50	0.20
0.58	0.00	31.83	0.14	63.08	0.38	94.33	0.36	125.58	0.20
0.67	0.00	31.92	0.14	63.17	0.37	94.42	0.36	125.67	0.21
0.75	0.00	32.00	0.14	63.25	0.37	94.50	0.36	125.75	0.21
0.83	0.00	32.08	0.14	63.33	0.37	94.58	0.36	125.83	0.21
0.92	0.00	32.17	0.14	63.42	0.37	94.67	0.36	125.92	0.21
1.00	0.00	32.25	0.14	63.50	0.37	94.75	0.36	126.00	0.21
1.08	0.00	32.33	0.14	63.58	0.37	94.83	0.36	126.08	0.21
1.17	0.00	32.42	0.14	63.67	0.36	94.92	0.35	126.17	0.21
1.25	0.00	32.50	0.14	63.75	0.36	95.00	0.35	126.25	0.21
1.33	0.00	32.58	0.14	63.83	0.36	95.08	0.35	126.33	0.21
1.42	0.00	32.67	0.14	63.92	0.36	95.17	0.35	126.42	0.22
1.50	0.00	32.75	0.14	64.00	0.36	95.25	0.35	126.50	0.22
1.58	0.00	32.83	0.14	64.08	0.36	95.33	0.35	126.58	0.22
1.67	0.00	32.92	0.14	64.17	0.36	95.42	0.35	126.67	0.22
1.75	0.00	33.00	0.14	64.25	0.35	95.50	0.35	126.75	0.22
1.83	0.00	33.08	0.14	64.33	0.35	95.58	0.34	126.83	0.22
1.92	0.00	33.17	0.14	64.42	0.35	95.67	0.34	126.92	0.23
2.00	0.00	33.25	0.14	64.50	0.35	95.75	0.34	127.00	0.23
2.08	0.00	33.33	0.14	64.58	0.34	95.83	0.34	127.08	0.23
2.17	0.00	33.42	0.14	64.67	0.34	95.92	0.34	127.17	0.23
2.25	0.00	33.50	0.14	64.75	0.34	96.00	0.34	127.25	0.23
2.33	0.00	33.58	0.14	64.83	0.34	96.08	0.34	127.33	0.24
2.42	0.00	33.67	0.14	64.92	0.34	96.17	0.34	127.42	0.24
2.50	0.00	33.75	0.14	65.00	0.34	96.25	0.34	127.50	0.24
2.58	0.00	33.83	0.14	65.08	0.34	96.33	0.34	127.58	0.24
2.67	0.00	33.92	0.14	65.17	0.34	96.42	0.34	127.67	0.24
2.75	0.00	34.00	0.14	65.25	0.34	96.50	0.34	127.75	0.24
2.83	0.00	34.08	0.14	65.33	0.34	96.58	0.34	127.83	0.25
2.92	0.00	34.17	0.14	65.42	0.34	96.67	0.34	127.92	0.25

3.00	0.00	34.25	0.14	65.50	0.34	96.75	0.33	128.00	0.25
3.08	0.00	34.33	0.14	65.58	0.33	96.83	0.33	128.08	0.25
3.17	0.00	34.42	0.14	65.67	0.34	96.92	0.33	128.17	0.25
3.25	0.00	34.50	0.14	65.75	0.33	97.00	0.33	128.25	0.25
3.33	0.00	34.58	0.14	65.83	0.33	97.08	0.33	128.33	0.25
3.42	0.00	34.67	0.14	65.92	0.33	97.17	0.33	128.42	0.25
3.50	0.00	34.75	0.14	66.00	0.33	97.25	0.33	128.50	0.25
3.58	0.00	34.83	0.14	66.08	0.32	97.33	0.33	128.58	0.26
3.67	0.00	34.92	0.14	66.17	0.33	97.42	0.33	128.67	0.26
3.75	0.00	35.00	0.14	66.25	0.33	97.50	0.33	128.75	0.26
3.83	0.00	35.08	0.14	66.33	0.32	97.58	0.33	128.83	0.26
3.92	0.00	35.17	0.14	66.42	0.32	97.67	0.33	128.92	0.26
4.00	0.00	35.25	0.14	66.50	0.33	97.75	0.33	129.00	0.26
4.08	0.00	35.33	0.14	66.58	0.32	97.83	0.33	129.08	0.26
4.17	0.00	35.42	0.14	66.67	0.32	97.92	0.33	129.17	0.26
4.25	0.00	35.50	0.14	66.75	0.32	98.00	0.32	129.25	0.27
4.33	0.00	35.58	0.14	66.83	0.32	98.08	0.32	129.33	0.27
4.42	0.00	35.67	0.14	66.92	0.32	98.17	0.32	129.42	0.27
4.50	0.00	35.75	0.14	67.00	0.32	98.25	0.32	129.50	0.27
4.58	0.00	35.83	0.14	67.08	0.32	98.33	0.32	129.58	0.28
4.67	0.00	35.92	0.14	67.17	0.32	98.42	0.32	129.67	0.28
4.75	0.00	36.00	0.14	67.25	0.32	98.50	0.32	129.75	0.28
4.83	0.00	36.08	0.14	67.33	0.33	98.58	0.32	129.83	0.29
4.92	0.00	36.17	0.14	67.42	0.34	98.67	0.32	129.92	0.29
5.00	0.00	36.25	0.14	67.50	0.34	98.75	0.32	130.00	0.29
5.08	0.00	36.33	0.15	67.58	0.35	98.83	0.32	130.08	0.29
5.17	0.00	36.42	0.15	67.67	0.35	98.92	0.32	130.17	0.29
5.25	0.00	36.50	0.15	67.75	0.36	99.00	0.32	130.25	0.29
5.33	0.00	36.58	0.15	67.83	0.37	99.08	0.32	130.33	0.29
5.42	0.00	36.67	0.15	67.92	0.38	99.17	0.32	130.42	0.29
5.50	0.00	36.75	0.15	68.00	0.40	99.25	0.32	130.50	0.29
5.58	0.00	36.83	0.15	68.08	0.41	99.33	0.32	130.58	0.29
5.67	0.00	36.92	0.15	68.17	0.42	99.42	0.32	130.67	0.29
5.75	0.00	37.00	0.15	68.25	0.43	99.50	0.32	130.75	0.29
5.83	0.00	37.08	0.15	68.33	0.45	99.58	0.31	130.83	0.29
5.92	0.00	37.17	0.15	68.42	0.47	99.67	0.31	130.92	0.29
6.00	0.00	37.25	0.15	68.50	0.48	99.75	0.31	131.00	0.29
6.08	0.00	37.33	0.15	68.58	0.50	99.83	0.31	131.08	0.29
6.17	0.00	37.42	0.15	68.67	0.52	99.92	0.31	131.17	0.29
6.25	0.00	37.50	0.15	68.75	0.53	100.00	0.31	131.25	0.29
6.33	0.00	37.58	0.15	68.83	0.56	100.08	0.31	131.33	0.29
6.42	0.00	37.67	0.15	68.92	0.57	100.17	0.31	131.42	0.29
6.50	0.00	37.75	0.16	69.00	0.58	100.25	0.31	131.50	0.29
6.58	0.00	37.83	0.16	69.08	0.60	100.33	0.31	131.58	0.28
6.67	0.00	37.92	0.16	69.17	0.61	100.42	0.31	131.67	0.28
6.75	0.00	38.00	0.16	69.25	0.63	100.50	0.30	131.75	0.28
6.83	0.00	38.08	0.16	69.33	0.63	100.58	0.30	131.83	0.28
6.92	0.00	38.17	0.16	69.42	0.64	100.67	0.30	131.92	0.28
7.00	0.00	38.25	0.16	69.50	0.66	100.75	0.30	132.00	0.28
7.08	0.00	38.33	0.16	69.58	0.68	100.83	0.30	132.08	0.28

28.00	0.19	59.25	0.51	90.50	0.44	121.75	0.17	153.00	0.11
28.08	0.19	59.33	0.50	90.58	0.44	121.83	0.17	153.08	0.11
28.17	0.19	59.42	0.50	90.67	0.43	121.92	0.17	153.17	0.11
28.25	0.19	59.50	0.49	90.75	0.43	122.00	0.17	153.25	0.11
28.33	0.19	59.58	0.49	90.83	0.43	122.08	0.17	153.33	0.11
28.42	0.19	59.67	0.49	90.92	0.43	122.17	0.17	153.42	0.11
28.50	0.19	59.75	0.48	91.00	0.42	122.25	0.18	153.50	0.11
28.58	0.18	59.83	0.48	91.08	0.42	122.33	0.18	153.58	0.11
28.67	0.18	59.92	0.47	91.17	0.42	122.42	0.18	153.67	0.11
28.75	0.18	60.00	0.47	91.25	0.42	122.50	0.18	153.75	0.11
28.83	0.18	60.08	0.47	91.33	0.41	122.58	0.18	153.83	0.11
28.92	0.18	60.17	0.46	91.42	0.41	122.67	0.18	153.92	0.11
29.00	0.18	60.25	0.46	91.50	0.41	122.75	0.18	154.00	0.11
29.08	0.18	60.33	0.45	91.58	0.41	122.83	0.18	154.08	0.11
29.17	0.18	60.42	0.45	91.67	0.41	122.92	0.18	154.17	0.11
29.25	0.17	60.50	0.44	91.75	0.41	123.00	0.18	154.25	0.11
29.33	0.17	60.58	0.44	91.83	0.40	123.08	0.18	154.33	0.11
29.42	0.17	60.67	0.44	91.92	0.40	123.17	0.18	154.42	0.11
29.50	0.17	60.75	0.43	92.00	0.40	123.25	0.18	154.50	0.11
29.58	0.17	60.83	0.43	92.08	0.40	123.33	0.18	154.58	0.11
29.67	0.17	60.92	0.42	92.17	0.40	123.42	0.18	154.67	0.11
29.75	0.17	61.00	0.42	92.25	0.39	123.50	0.18	154.75	0.11
29.83	0.17	61.08	0.42	92.33	0.39	123.58	0.18	154.83	0.11
29.92	0.16	61.17	0.42	92.42	0.39	123.67	0.18	154.92	0.11
30.00	0.16	61.25	0.41	92.50	0.39	123.75	0.18	155.00	0.11
30.08	0.16	61.33	0.41	92.58	0.38	123.83	0.18	155.08	0.11
30.17	0.16	61.42	0.40	92.67	0.38	123.92	0.18	155.17	0.11
30.25	0.16	61.50	0.40	92.75	0.38	124.00	0.18	155.25	0.11
30.33	0.16	61.58	0.40	92.83	0.38	124.08	0.18	155.33	0.11
30.42	0.16	61.67	0.40	92.92	0.38	124.17	0.18	155.42	0.11
30.50	0.16	61.75	0.39	93.00	0.37	124.25	0.18	155.50	0.11
30.58	0.16	61.83	0.39	93.08	0.37	124.33	0.19	155.58	0.11
30.67	0.16	61.92	0.39	93.17	0.37	124.42	0.19	155.67	0.11
30.75	0.16	62.00	0.38	93.25	0.37	124.50	0.19	155.75	0.11
30.83	0.15	62.08	0.38	93.33	0.37	124.58	0.19	155.83	0.10
30.92	0.15	62.17	0.38	93.42	0.37	124.67	0.20	155.92	0.11
31.00	0.15	62.25	0.38	93.50	0.37	124.75	0.20	156.00	0.10
31.08	0.15	62.33	0.39	93.58	0.37	124.83	0.20		
31.17	0.15	62.42	0.39	93.67	0.37	124.92	0.20		

HEC-RAS Plan: WC56 - BSS1 with Ponds River: wc56centreline Reach: wc5

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	2388.964	100-Year	7.66	92.94	93.92	93.75	93.96	0.002531	1.11	13.83	38.48	0.42
wc5	2388.964	5-Year	3.23	92.94	93.62	93.50	93.69	0.006527	1.21	3.44	27.10	0.62
wc5	2388.964	2-Year	1.81	92.94	93.48	93.36	93.54	0.006635	1.05	1.73	5.59	0.60
wc5	2290	100-Year	7.66	92.11	93.55		93.63	0.002459	1.20	6.38	7.50	0.42
wc5	2290	5-Year	3.23	92.11	92.84		92.95	0.008000	1.50	2.15	4.41	0.69
wc5	2290	2-Year	1.81	92.11	92.62		92.72	0.010579	1.42	1.27	3.52	0.76
wc5	2256	100-Year	7.66	91.90	93.39	92.77	93.54	0.002125	1.72	4.46	6.37	0.45
wc5	2256	5-Year	3.23	91.90	92.69	92.39	92.78	0.003193	1.37	2.35	3.71	0.50
wc5	2256	2-Year	1.81	91.90	92.49	92.24	92.55	0.002573	1.02	1.77	3.54	0.42
wc5	2240.61		Culvert									
wc5	2221	100-Year	7.66	91.58	92.65		92.94	0.006338	2.38	3.22	5.08	0.73
wc5	2221	5-Year	3.23	91.58	92.52		92.59	0.001764	1.15	2.81	3.83	0.38
wc5	2221	2-Year	1.81	91.58	92.41		92.44	0.000823	0.73	2.50	3.74	0.25
wc5	2198	100-Year	7.66	91.82	92.57	92.57	92.72	0.010877	2.12	7.53	24.37	0.86
wc5	2198	5-Year	3.23	91.82	92.41	92.41	92.51	0.009011	1.57	3.69	22.28	0.74
wc5	2198	2-Year	1.81	91.82	92.27	92.25	92.38	0.012475	1.46	1.45	10.30	0.83
wc5	2150	100-Year	7.66	91.45	92.18	92.16	92.31	0.009069	1.96	8.33	26.44	0.79
wc5	2150	5-Year	3.23	91.45	92.00	92.00	92.10	0.008810	1.53	3.83	22.76	0.74
wc5	2150	2-Year	1.81	91.45	91.91	91.86	91.98	0.008045	1.25	2.00	15.18	0.68
wc5	2068.437	100-Year	7.66	90.60	91.30	91.30	91.45	0.010737	2.14	7.68	24.68	0.87
wc5	2068.437	5-Year	3.23	90.60	91.10	91.10	91.23	0.011420	1.72	3.29	18.07	0.84
wc5	2068.437	2-Year	1.81	90.60	90.99	90.98	91.09	0.013325	1.50	1.64	10.18	0.86
wc5	2044.707	100-Year	7.66	90.00	90.74	90.71	90.86	0.007685	1.76	7.91	24.66	0.73
wc5	2044.707	5-Year	3.23	90.00	90.56	90.50	90.64	0.007194	1.33	3.57	20.29	0.66
wc5	2044.707	2-Year	1.81	90.00	90.44		90.51	0.008162	1.13	1.77	10.38	0.67
wc5	1986.134	100-Year	7.66	89.80	90.48	90.48	90.63	0.010496	2.08	7.57	24.32	0.85
wc5	1986.134	5-Year	3.23	89.80	90.28	90.28	90.40	0.011695	1.68	3.18	17.22	0.84
wc5	1986.134	2-Year	1.81	89.80	90.19	90.16	90.27	0.009840	1.31	1.90	11.84	0.74
wc5	1901.030	100-Year	7.66	88.80	89.64		89.70	0.003205	1.37	11.84	25.74	0.49
wc5	1901.030	5-Year	3.23	88.80	89.28	89.28	89.40	0.010740	1.65	3.18	18.46	0.81
wc5	1901.030	2-Year	1.81	88.80	89.14	89.14	89.26	0.015827	1.54	1.34	8.33	0.92
wc5	1874.583	100-Year	7.66	88.20	89.09	89.09	89.49	0.013134	2.89	2.93	26.48	1.00
wc5	1874.583	5-Year	3.23	88.20	88.74	88.74	88.96	0.015233	2.16	1.63	20.33	0.99
wc5	1874.583	2-Year	1.81	88.20	88.59	88.59	88.74	0.016775	1.78	1.09	12.32	0.97
wc5	1853.265		Culvert									
wc5	1801.453	100-Year	7.66	87.80	88.77	88.77	89.20	0.012878	3.04	2.98	26.49	1.01
wc5	1801.453	5-Year	3.23	87.80	88.46	88.39	88.65	0.009238	1.97	1.92	23.92	0.80
wc5	1801.453	2-Year	1.81	87.80	88.33	88.23	88.43	0.006698	1.43	1.47	19.07	0.66
wc5	1693.967	100-Year	7.66	87.47	88.30		88.37	0.004744	1.51	10.62	25.44	0.58
wc5	1693.967	5-Year	3.23	87.47	88.08		88.14	0.005070	1.21	5.25	23.40	0.56
wc5	1693.967	2-Year	1.81	87.47	87.99		88.03	0.004717	1.01	3.11	21.73	0.52
wc5	1602.883	100-Year	7.66	87.00	87.71		87.78	0.005326	1.58	10.33	25.38	0.62
wc5	1602.883	5-Year	3.23	87.00	87.51		87.56	0.004767	1.19	5.53	23.08	0.55
wc5	1602.883	2-Year	1.81	87.00	87.40		87.45	0.005320	1.05	3.12	21.04	0.56
wc5	1537.467	100-Year	7.66	86.60	87.44		87.50	0.003616	1.43	11.76	25.79	0.52
wc5	1537.467	5-Year	3.23	86.60	87.15		87.22	0.005968	1.34	4.77	21.51	0.62
wc5	1537.467	2-Year	1.81	86.60	87.05		87.10	0.005569	1.10	2.79	16.05	0.57
wc5	1471.795	100-Year	7.66	86.20	87.39		87.40	0.000610	0.71	21.65	31.92	0.22
wc5	1471.795	5-Year	3.23	86.20	86.78		86.85	0.005318	1.17	4.38	24.29	0.57
wc5	1471.795	2-Year	1.81	86.20	86.67		86.72	0.005764	0.99	2.19	14.30	0.57
wc5	1439.675	100-Year	7.66	86.00	87.38		87.39	0.000362	0.63	27.35	33.37	0.18
wc5	1439.675	5-Year	3.23	86.00	86.64		86.69	0.003827	1.15	5.27	25.51	0.50
wc5	1439.675	2-Year	1.81	86.00	86.55		86.59	0.002678	0.86	3.26	20.77	0.40
wc5	1320.692	100-Year	11.37	85.60	87.35		87.36	0.000320	0.70	35.97	32.60	0.17
wc5	1320.692	5-Year	4.82	85.60	86.49		86.52	0.001436	0.89	11.11	25.61	0.33
wc5	1320.692	2-Year	2.88	85.60	86.20	86.11	86.27	0.005090	1.22	4.02	22.73	0.57
wc5	1316.508	100-Year	11.37	85.26	87.16	86.44	87.32	0.002197	1.82	6.25	15.76	0.44

HEC-RAS Plan: WC56 - BSS1 with Ponds River: wc56centreline Reach: wc5 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	1316.508	5-Year	4.82	85.26	86.34	86.00	86.45	0.003334	1.46	3.30	5.37	0.49
wc5	1316.508	2-Year	2.88	85.26	86.06	85.83	86.14	0.004178	1.27	2.26	4.35	0.52
wc5	1307.90		Culvert									
wc5	1291.617	100-Year	11.37	85.21	86.40	86.40	86.93	0.012933	3.23	3.52	6.08	1.01
wc5	1291.617	5-Year	4.82	85.21	86.06		86.27	0.008505	2.02	2.38	4.97	0.76
wc5	1291.617	2-Year	2.88	85.21	85.88		86.01	0.008133	1.62	1.77	4.23	0.71
wc5	1288.054	100-Year	11.37	85.00	86.29		86.54	0.007489	2.23	5.14	5.73	0.74
wc5	1288.054	5-Year	4.82	85.00	85.90		86.04	0.007328	1.62	2.98	5.11	0.68
wc5	1288.054	2-Year	2.88	85.00	85.70		85.80	0.007294	1.41	2.04	4.31	0.65
wc5	1225.493	100-Year	11.37	84.72	86.00		86.26	0.007627	2.23	5.22	6.64	0.74
wc5	1225.493	5-Year	4.82	84.72	85.61		85.75	0.007596	1.64	2.94	5.08	0.69
wc5	1225.493	2-Year	2.88	84.72	85.42		85.52	0.007602	1.43	2.01	4.28	0.67
wc5	1157.883	100-Year	11.37	84.21	85.50		85.74	0.007450	2.21	5.33	7.23	0.74
wc5	1157.883	5-Year	4.82	84.21	85.11		85.24	0.007391	1.62	2.97	5.10	0.68
wc5	1157.883	2-Year	2.88	84.21	84.91		85.01	0.007413	1.42	2.03	4.30	0.66
wc5	1131.031	100-Year	11.37	84.01	85.31		85.55	0.006890	2.16	5.59	8.21	0.71
wc5	1131.031	5-Year	4.82	84.01	84.92		85.05	0.007174	1.61	3.00	5.12	0.67
wc5	1131.031	2-Year	2.88	84.01	84.72		84.82	0.007111	1.40	2.06	4.33	0.65
wc5	1112.568	100-Year	11.37	83.88	85.17	85.01	85.42	0.007381	2.21	5.35	7.28	0.73
wc5	1112.568	5-Year	4.82	83.88	84.77	84.62	84.91	0.007574	1.64	2.94	5.08	0.69
wc5	1112.568	2-Year	2.88	83.88	84.58	84.44	84.68	0.007522	1.43	2.02	4.29	0.66
wc5	1071.480	100-Year	11.37	83.57	84.86	84.70	85.11	0.007356	2.21	5.25	7.82	0.73
wc5	1071.480	5-Year	4.82	83.57	84.47		84.60	0.007479	1.63	2.96	5.09	0.68
wc5	1071.480	2-Year	2.88	83.57	84.27		84.37	0.007572	1.43	2.01	4.28	0.67
wc5	1034.499	100-Year	11.37	83.29	84.61	84.41	84.85	0.006726	2.15	5.35	6.08	0.70
wc5	1034.499	5-Year	4.82	83.29	84.20	84.03	84.33	0.007159	1.60	3.00	5.13	0.67
wc5	1034.499	2-Year	2.88	83.29	84.02	83.85	84.11	0.006330	1.34	2.15	4.41	0.61
wc5	1013.774	100-Year	11.37	83.14	84.27	84.27	84.64	0.013861	2.68	4.31	6.51	0.97
wc5	1013.774	5-Year	4.82	83.14	83.94	83.88	84.13	0.011747	1.93	2.50	4.72	0.84
wc5	1013.774	2-Year	2.88	83.14	83.91	83.70	83.99	0.004998	1.23	2.35	4.58	0.55
wc5	951.8970	100-Year	15.28	82.62	84.49	83.84	84.49	0.000084	0.31	129.26	334.27	0.08
wc5	951.8970	5-Year	6.65	82.62	83.77	83.62	83.82	0.002703	1.13	9.68	38.01	0.42
wc5	951.8970	2-Year	4.12	82.62	83.48	83.32	83.60	0.007158	1.56	2.85	10.27	0.66
wc5	942.8887	100-Year	15.28	82.59	83.90	84.17	84.44	0.013022	3.25	4.71	39.95	1.00
wc5	942.8887	5-Year	6.65	82.59	83.53	83.45	83.77	0.009925	2.14	3.10	5.28	0.82
wc5	942.8887	2-Year	4.12	82.59	83.44	83.27	83.56	0.006053	1.53	2.70	4.91	0.62
wc5	937.1887		Culvert									
wc5	931	100-Year	15.28	82.47	83.79	83.79	84.33	0.013046	3.25	4.71	87.11	1.00
wc5	931	5-Year	6.65	82.47	83.48	83.33	83.68	0.007662	1.98	3.35	5.96	0.73
wc5	931	2-Year	4.12	82.47	83.43	83.14	83.51	0.003785	1.33	3.11	5.32	0.50
wc5	918.3739	100-Year	15.28	82.41	83.65	83.57	83.65	0.000042	0.14	125.54	174.51	0.05
wc5	918.3739	5-Year	6.65	82.41	83.58	83.37	83.58	0.000010	0.07	113.94	173.90	0.03
wc5	918.3739	2-Year	4.12	82.41	83.29	83.20	83.42	0.010119	1.64	2.51	5.41	0.77
wc5	815.3577	100-Year	15.28	81.85	83.44	83.19	83.62	0.006433	1.87	8.16	10.35	0.67
wc5	815.3577	5-Year	6.65	81.85	83.42	82.72	83.46	0.001281	0.83	8.00	10.23	0.30
wc5	815.3577	2-Year	4.12	81.85	82.98	82.53	83.02	0.002241	0.97	4.27	6.55	0.38
wc5	680.8133	100-Year	18.86	81.64	83.56	83.08	83.56	0.000002	0.04	481.43	277.15	0.01
wc5	680.8133	5-Year	8.07	81.64	83.45	82.60	83.45	0.000000	0.02	449.32	277.07	0.01
wc5	680.8133	2-Year	4.97	81.64	82.91	82.39	82.96	0.001519	0.99	5.09	6.10	0.33
wc5	678.6898	100-Year	18.86	81.55	83.56	82.98	83.56	0.000001	0.04	549.85	276.53	0.01
wc5	678.6898	5-Year	8.07	81.55	83.45	82.51	83.45	0.000000	0.02	517.82	276.51	0.00
wc5	678.6898	2-Year	4.97	81.55	82.90	82.30	82.94	0.001154	0.91	5.54	6.09	0.29
wc5	665	100-Year	18.86	81.40	83.56	82.79	83.56	0.000024	0.18	217.00	388.44	0.05
wc5	665	5-Year	8.07	81.40	83.45	82.44	83.45	0.000008	0.10	172.23	388.44	0.03
wc5	665	2-Year	4.97	81.40	82.90	82.28	82.90	0.000130	0.28	37.12	145.54	0.10
wc5	660	100-Year	18.86	81.32	83.54	83.51	83.56	0.004041	0.94	45.24	348.74	0.47
wc5	660	5-Year	8.07	81.32	82.95	82.74	83.40	0.007638	2.98	2.71	7.29	0.80

HEC-RAS Plan: WC56 - BSS1 with Ponds River: wc56centreline Reach: wc5 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	660	2-Year	4.97	81.32	82.41	82.41	82.85	0.014107	2.95	1.69	5.07	1.00
wc5	655		Culvert									
wc5	651.8919	100-Year	18.86	80.93	83.47	83.47	83.50	0.002640	1.36	57.70	496.40	0.44
wc5	651.8919	5-Year	8.07	80.93	82.15	82.15	82.75	0.011674	3.43	2.35	34.92	1.00
wc5	651.8919	2-Year	4.97	80.93	81.81	81.81	82.25	0.013066	2.93	1.70	5.04	1.00
wc5	648.3854	100-Year	18.86	80.78	82.48	81.93	82.48	0.000002	0.04	613.18	479.94	0.01
wc5	648.3854	5-Year	8.07	80.78	81.74	81.74	82.05	0.015743	2.46	3.29	5.34	1.00
wc5	648.3854	2-Year	4.97	80.78	81.53	81.53	81.78	0.016719	2.21	2.25	4.50	1.00
wc5	553.6066	100-Year	18.86	80.14	82.48	81.43	82.48	0.000002	0.05	591.15	479.06	0.01
wc5	553.6066	5-Year	8.07	80.14	81.66	81.06	81.67	0.000642	0.59	22.46	117.10	0.22
wc5	553.6066	2-Year	4.97	80.14	81.25	80.90	81.29	0.002246	0.87	5.69	10.69	0.38
wc5	521.5115	100-Year	18.86	80.04	82.48	81.54	82.48	0.000002	0.07	510.47	342.78	0.02
wc5	521.5115	5-Year	8.07	80.04	81.61	81.00	81.66	0.001142	1.04	12.60	38.90	0.30
wc5	521.5115	2-Year	4.97	80.04	81.19	80.79	81.25	0.002495	1.15	4.46	7.60	0.41
wc5	518.7136	100-Year	20.10	79.98	82.03	81.59	82.44	0.004746	2.84	7.07	344.38	0.67
wc5	518.7136	5-Year	9.73	79.98	81.40	81.04	81.62	0.004377	2.08	4.69	14.16	0.60
wc5	518.7136	2-Year	6.06	79.98	81.04	80.80	81.21	0.005388	1.83	3.31	6.11	0.63
wc5	503.04		Culvert									
wc5	487.5449	100-Year	20.10	79.68	81.21	81.21	81.92	0.011251	3.73	5.39	33.36	1.00
wc5	487.5449	5-Year	9.73	79.68	80.67	80.67	81.10	0.013114	2.92	3.33	11.92	1.00
wc5	487.5449	2-Year	6.06	79.68	80.55	80.43	80.77	0.008436	2.12	2.86	10.60	0.78
wc5	484.1846	100-Year	20.10	79.63	81.01	80.84	81.07	0.002413	1.40	26.88	73.41	0.44
wc5	484.1846	5-Year	9.73	79.63	80.83	80.60	80.87	0.001676	1.03	16.03	52.83	0.35
wc5	484.1846	2-Year	6.06	79.63	80.58	80.35	80.66	0.004001	1.28	5.39	24.31	0.52
wc5	381.2556	100-Year	20.10	79.11	80.81	80.71	80.88	0.002223	1.55	29.47	76.60	0.43
wc5	381.2556	5-Year	9.73	79.11	80.53	80.16	80.67	0.003556	1.67	5.88	6.10	0.52
wc5	381.2556	2-Year	6.06	79.11	80.26	79.94	80.36	0.003704	1.40	4.33	5.56	0.50
wc5	359.8282	100-Year	20.10	78.85	80.60	80.60	80.75	0.004766	2.07	21.00	78.39	0.59
wc5	359.8282	5-Year	9.73	78.85	80.17	80.03	80.44	0.009705	2.27	4.29	5.15	0.79
wc5	359.8282	2-Year	6.06	78.85	79.98	79.77	80.15	0.007246	1.80	3.36	4.58	0.67
wc5	304.0528	100-Year	20.10	78.22	80.02	80.02	80.15	0.003720	1.94	22.42	97.81	0.55
wc5	304.0528	5-Year	9.73	78.22	79.46	79.46	79.72	0.011721	2.34	4.79	10.48	0.89
wc5	304.0528	2-Year	6.06	78.22	79.28	79.28	79.50	0.013243	2.09	3.07	8.82	0.90
wc5	250	100-Year	20.10	77.55	79.81		79.88	0.001256	1.19	19.47	37.55	0.33
wc5	250	5-Year	9.73	77.55	78.52	78.52	78.82	0.015553	2.43	4.00	6.77	1.01
wc5	250	2-Year	6.06	77.55	78.33	78.33	78.57	0.016678	2.17	2.79	5.94	1.01
wc5	230	100-Year	20.10	76.75	79.76	78.22	79.86	0.000703	1.44	13.98	116.14	0.28
wc5	230	5-Year	9.73	76.75	78.26	77.78	78.39	0.002463	1.57	6.21	11.51	0.46
wc5	230	2-Year	6.06	76.75	77.87	77.58	77.98	0.003578	1.45	4.18	9.32	0.52
wc5	215		Culvert									
wc5	200	100-Year	20.10	76.48	78.72		78.92	0.002178	2.02	9.96	15.13	0.47
wc5	200	5-Year	9.73	76.48	78.08		78.19	0.001966	1.46	6.65	10.66	0.41
wc5	200	2-Year	6.06	76.48	77.76		77.83	0.001985	1.21	4.99	8.65	0.40
wc5	170	100-Year	20.10	76.48	78.80	77.66	78.83	0.000437	0.91	26.95	18.96	0.21
wc5	170	5-Year	9.73	76.48	78.11	77.36	78.14	0.000552	0.76	14.73	16.84	0.22
wc5	170	2-Year	6.06	76.48	77.78	77.20	77.80	0.000709	0.69	9.16	12.56	0.23

HEC-RAS Plan: 5&6 BSS1-Ultimate River: wc56centreline Reach: wc5

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	2388.964	100-Year	13.58	92.94	94.28	93.88	94.31	0.001156	0.99	28.77	42.43	0.31
wc5	2388.964	5-Year	5.46	92.94	93.77	93.68	93.82	0.004195	1.21	8.21	34.25	0.52
wc5	2388.964	2-Year	3.14	92.94	93.61	93.49	93.68	0.006626	1.21	3.27	26.51	0.62
wc5	2290	100-Year	13.58	92.11	93.98		94.07	0.002117	1.34	10.93	16.56	0.41
wc5	2290	5-Year	5.46	92.11	93.14		93.26	0.005279	1.48	3.69	5.65	0.58
wc5	2290	2-Year	3.14	92.11	92.82		92.94	0.008111	1.50	2.09	4.36	0.69
wc5	2256	100-Year	13.58	91.90	93.59	93.18	93.92	0.008121	2.58	6.12	14.17	0.72
wc5	2256	5-Year	5.46	91.90	92.96	92.60	93.11	0.003390	1.72	3.17	4.07	0.54
wc5	2256	2-Year	3.14	91.90	92.68	92.38	92.77	0.003166	1.35	2.32	3.70	0.49
wc5	2240.61		Culvert									
wc5	2221	100-Year	13.58	91.58	92.86	92.86	93.50	0.011180	3.55	3.82	6.04	1.00
wc5	2221	5-Year	5.46	91.58	92.59		92.76	0.003904	1.80	3.03	4.08	0.57
wc5	2221	2-Year	3.14	91.58	92.51		92.58	0.001696	1.12	2.80	3.83	0.37
wc5	2198	100-Year	13.58	91.82	92.72	92.72	92.92	0.012337	2.60	11.20	25.59	0.95
wc5	2198	5-Year	5.46	91.82	92.50	92.50	92.63	0.009604	1.85	5.96	23.72	0.79
wc5	2198	2-Year	3.14	91.82	92.40	92.40	92.51	0.008910	1.55	3.61	22.20	0.74
wc5	2150	100-Year	13.58	91.45	92.37	92.30	92.51	0.008218	2.22	13.46	28.38	0.79
wc5	2150	5-Year	5.46	91.45	92.09	92.09	92.22	0.010180	1.86	5.94	24.72	0.82
wc5	2150	2-Year	3.14	91.45	92.00	91.99	92.10	0.008728	1.52	3.74	22.62	0.73
wc5	2068.437	100-Year	13.58	90.60	91.45	91.45	91.65	0.012055	2.62	11.43	25.93	0.95
wc5	2068.437	5-Year	5.46	90.60	91.23	91.23	91.36	0.009620	1.88	6.04	23.83	0.81
wc5	2068.437	2-Year	3.14	90.60	91.10	91.10	91.22	0.011578	1.71	3.17	17.61	0.84
wc5	2044.707	100-Year	13.58	90.00	90.93	90.85	91.07	0.007383	2.06	12.58	26.16	0.75
wc5	2044.707	5-Year	5.46	90.00	90.66	90.63	90.77	0.007845	1.60	5.84	23.84	0.72
wc5	2044.707	2-Year	3.14	90.00	90.55	90.49	90.63	0.007134	1.31	3.48	19.94	0.66
wc5	1986.134	100-Year	13.58	89.80	90.63	90.63	90.83	0.012032	2.57	11.20	25.59	0.95
wc5	1986.134	5-Year	5.46	89.80	90.41	90.41	90.54	0.009963	1.86	5.81	23.51	0.81
wc5	1986.134	2-Year	3.14	89.80	90.27	90.27	90.40	0.011817	1.68	3.08	16.86	0.84
wc5	1901.030	100-Year	13.58	88.80	90.34		90.36	0.000668	0.95	31.63	31.30	0.25
wc5	1901.030	5-Year	5.46	88.80	89.45		89.54	0.006118	1.57	7.01	23.91	0.65
wc5	1901.030	2-Year	3.14	88.80	89.27	89.27	89.39	0.010841	1.65	3.07	18.13	0.81
wc5	1874.583	100-Year	13.58	88.20	90.03	89.47	90.30	0.003308	2.38	6.35	34.01	0.57
wc5	1874.583	5-Year	5.46	88.20	88.93	88.93	89.25	0.013849	2.57	2.34	24.86	1.00
wc5	1874.583	2-Year	3.14	88.20	88.73	88.73	88.95	0.015179	2.13	1.61	19.90	0.98
wc5	1853.265		Culvert									
wc5	1801.453	100-Year	13.58	87.80	89.17	89.17	89.79	0.011787	3.70	4.37	29.69	1.03
wc5	1801.453	5-Year	5.46	87.80	88.63	88.59	88.94	0.011524	2.58	2.50	25.37	0.93
wc5	1801.453	2-Year	3.14	87.80	88.48	88.38	88.64	0.007901	1.86	1.99	24.12	0.75
wc5	1693.967	100-Year	13.58	87.47	88.48		88.58	0.005516	1.90	15.22	26.85	0.65
wc5	1693.967	5-Year	5.46	87.47	88.16		88.24	0.006841	1.56	7.15	24.30	0.67
wc5	1693.967	2-Year	3.14	87.47	88.05	88.02	88.12	0.006435	1.31	4.61	23.02	0.63
wc5	1602.883	100-Year	13.58	87.00	88.03		88.09	0.003130	1.57	18.77	27.91	0.51
wc5	1602.883	5-Year	5.46	87.00	87.70		87.74	0.002829	1.15	10.16	25.32	0.45
wc5	1602.883	2-Year	3.14	87.00	87.54		87.58	0.003429	1.05	6.19	23.44	0.47
wc5	1537.467	100-Year	13.58	86.60	87.92		87.95	0.001380	1.22	25.00	29.62	0.35
wc5	1537.467	5-Year	5.46	86.60	87.65		87.66	0.000634	0.70	17.26	27.45	0.23
wc5	1537.467	2-Year	3.14	86.60	87.08	87.08	87.20	0.012047	1.70	3.30	17.61	0.85
wc5	1471.795	100-Year	13.58	86.20	87.89		87.90	0.000384	0.74	39.56	39.24	0.19
wc5	1471.795	5-Year	5.46	86.20	87.64		87.64	0.000130	0.38	30.07	35.87	0.11
wc5	1471.795	2-Year	3.14	86.20	87.04		87.05	0.000598	0.53	11.24	28.32	0.21
wc5	1439.675	100-Year	13.58	86.00	87.88		87.89	0.000288	0.70	45.39	39.54	0.17
wc5	1439.675	5-Year	5.46	86.00	87.63		87.64	0.000084	0.34	36.25	35.72	0.09
wc5	1439.675	2-Year	3.14	86.00	87.03		87.04	0.000249	0.42	16.36	30.20	0.14
wc5	1320.692	100-Year	16.52	85.60	87.85		87.87	0.000268	0.76	61.89	69.27	0.17
wc5	1320.692	5-Year	6.42	85.60	87.63		87.63	0.000069	0.36	47.15	58.28	0.08
wc5	1320.692	2-Year	3.81	85.60	87.02		87.02	0.000090	0.32	25.83	29.91	0.09
wc5	1316.508	100-Year	16.52	85.26	87.83	87.76	87.85	0.001588	1.02	50.50	238.23	0.34

HEC-RAS Plan: 5&6 BSS1-Ultimate River: wc56centreline Reach: wc5 (Continued)

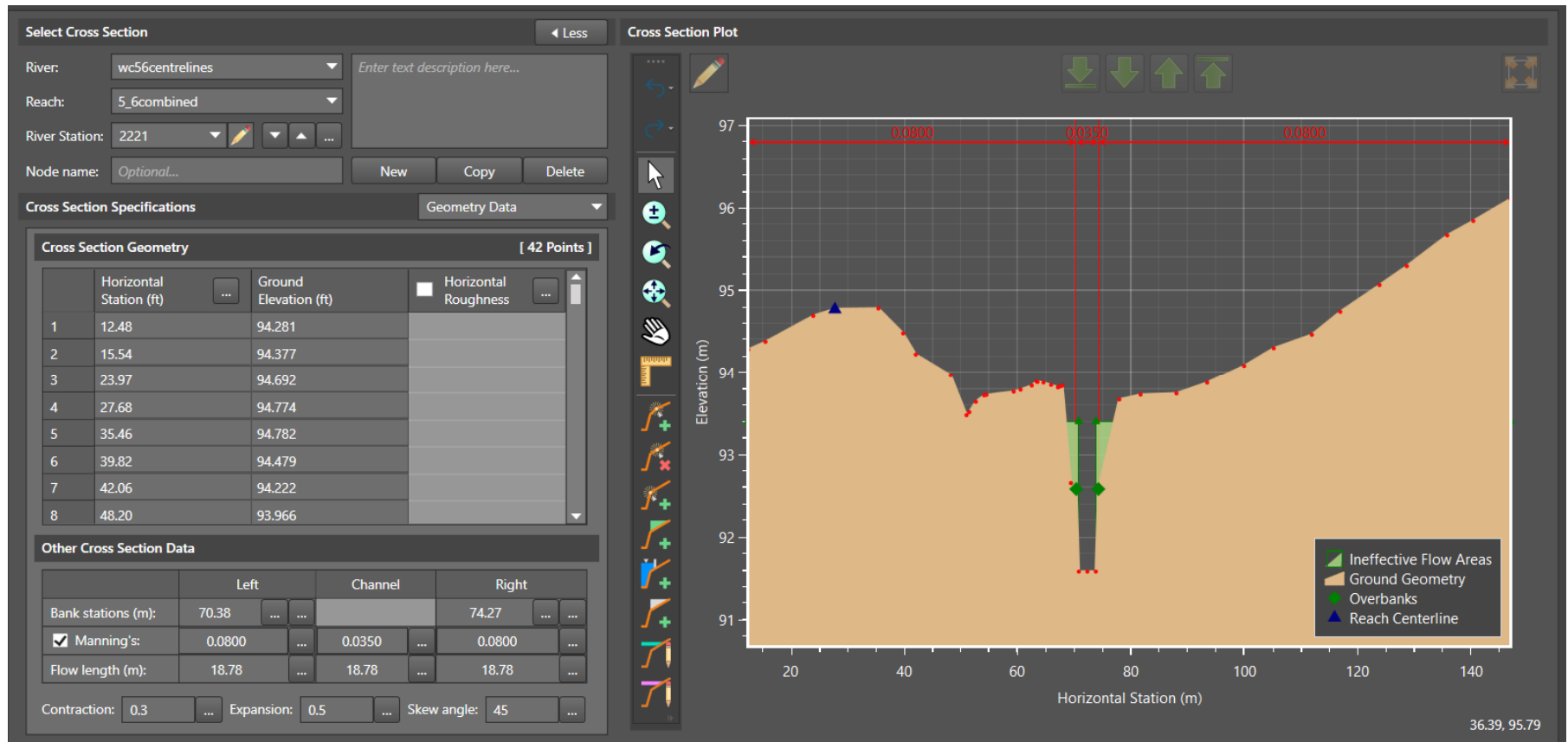
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	1316.508	5-Year	6.42	85.26	87.40	86.49	87.60	0.001779	2.00	3.21	21.35	0.44
wc5	1316.508	2-Year	3.81	85.26	86.88	86.13	87.00	0.001580	1.57	2.43	8.92	0.39
wc5	1307.90		Culvert									
wc5	1291.617	100-Year	16.52	85.21	87.77	87.77	87.84	0.004681	1.68	26.19	173.41	0.58
wc5	1291.617	5-Year	6.42	85.21	86.44	86.44	87.06	0.011321	3.49	1.84	6.18	1.00
wc5	1291.617	2-Year	3.81	85.21	86.08	86.08	86.51	0.012740	2.93	1.30	5.04	1.01
wc5	1288.054	100-Year	16.52	85.00	86.51		86.86	0.007836	2.62	6.39	5.90	0.78
wc5	1288.054	5-Year	6.42	85.00	86.03		86.19	0.007299	1.76	3.65	5.52	0.69
wc5	1288.054	2-Year	3.81	85.00	85.81		85.92	0.007304	1.52	2.50	4.72	0.67
wc5	1225.493	100-Year	16.52	84.72	86.22		86.55	0.007745	2.59	6.74	7.50	0.78
wc5	1225.493	5-Year	6.42	84.72	85.74		85.90	0.007602	1.78	3.61	5.58	0.70
wc5	1225.493	2-Year	3.81	84.72	85.52		85.64	0.007599	1.54	2.47	4.69	0.68
wc5	1157.883	100-Year	16.52	84.21	85.71	85.57	86.03	0.007581	2.56	6.98	8.50	0.77
wc5	1157.883	5-Year	6.42	84.21	85.24		85.39	0.007400	1.77	3.64	5.65	0.69
wc5	1157.883	2-Year	3.81	84.21	85.01		85.13	0.007400	1.53	2.49	4.71	0.67
wc5	1131.031	100-Year	16.52	84.01	85.56	85.39	85.83	0.006247	2.39	7.83	10.36	0.70
wc5	1131.031	5-Year	6.42	84.01	85.04		85.20	0.007139	1.75	3.68	5.79	0.68
wc5	1131.031	2-Year	3.81	84.01	84.82		84.94	0.007146	1.51	2.52	4.74	0.66
wc5	1112.568	100-Year	16.52	83.88	85.33	85.25	85.69	0.008761	2.68	6.62	8.28	0.82
wc5	1112.568	5-Year	6.42	83.88	84.90	84.74	85.06	0.007569	1.78	3.61	5.63	0.70
wc5	1112.568	2-Year	3.81	83.88	84.68	84.53	84.80	0.007564	1.54	2.47	4.69	0.68
wc5	1071.480	100-Year	16.52	83.57	85.16	85.04	85.38	0.004992	2.19	9.77	18.52	0.63
wc5	1071.480	5-Year	6.42	83.57	84.59		84.75	0.007500	1.77	3.62	5.56	0.70
wc5	1071.480	2-Year	3.81	83.57	84.37		84.49	0.007510	1.54	2.48	4.70	0.68
wc5	1034.499	100-Year	16.52	83.29	84.79	84.64	85.14	0.007877	2.62	6.49	6.41	0.78
wc5	1034.499	5-Year	6.42	83.29	84.34	84.15	84.49	0.006433	1.69	3.80	5.60	0.65
wc5	1034.499	2-Year	3.81	83.29	84.10	83.94	84.21	0.007258	1.52	2.51	4.73	0.66
wc5	1013.774	100-Year	16.52	83.14	84.51	84.51	84.93	0.011504	2.91	6.05	8.28	0.93
wc5	1013.774	5-Year	6.42	83.14	84.00	84.00	84.27	0.016212	2.34	2.75	4.92	1.00
wc5	1013.774	2-Year	3.81	83.14	83.94	83.79	84.06	0.007591	1.54	2.47	4.69	0.68
wc5	951.8970	100-Year	21.77	82.62	84.24	83.93	84.26	0.001218	1.05	51.79	209.51	0.31
wc5	951.8970	5-Year	8.75	82.62	83.97	83.72	83.99	0.001004	0.81	18.85	51.42	0.27
wc5	951.8970	2-Year	5.29	82.62	83.65	83.45	83.73	0.004021	1.29	5.82	28.24	0.51
wc5	942.8887	100-Year	21.77	82.59	84.19	84.19	84.25	0.002962	1.59	41.65	283.81	0.48
wc5	942.8887	5-Year	8.75	82.59	83.66	83.57	83.95	0.009925	2.39	3.66	7.04	0.84
wc5	942.8887	2-Year	5.29	82.59	83.55	83.36	83.69	0.005977	1.68	3.15	5.32	0.63
wc5	937.1887		Culvert									
wc5	931	100-Year	21.77	82.47	84.18	84.18	84.21	0.001756	1.28	54.17	304.53	0.37
wc5	931	5-Year	8.75	82.47	83.54	83.46	83.84	0.010215	2.41	3.62	8.54	0.85
wc5	931	2-Year	5.29	82.47	83.51	83.24	83.63	0.004221	1.51	3.49	7.35	0.54
wc5	918.3739	100-Year	21.77	82.41	83.85	83.57	83.85	0.000039	0.16	161.07	174.94	0.05
wc5	918.3739	5-Year	8.75	82.41	83.69	83.57	83.69	0.000012	0.08	133.07	174.60	0.03
wc5	918.3739	2-Year	5.29	82.41	83.41	83.28	83.55	0.008377	1.65	3.20	6.17	0.72
wc5	815.3577	100-Year	21.77	81.85	83.41	83.41	83.80	0.014220	2.76	7.89	10.13	1.00
wc5	815.3577	5-Year	8.75	81.85	83.69	82.85	83.69	0.000003	0.04	231.09	222.90	0.01
wc5	815.3577	2-Year	5.29	81.85	83.13	82.62	83.18	0.002198	0.99	5.33	7.78	0.38
wc5	680.8133	100-Year	24.44	81.64	83.57	83.10	83.57	0.000002	0.06	484.63	277.16	0.01
wc5	680.8133	5-Year	9.83	81.64	83.69	82.69	83.69	0.000000	0.02	516.60	277.24	0.01
wc5	680.8133	2-Year	5.94	81.64	83.07	82.46	83.12	0.001267	1.00	6.07	6.45	0.31
wc5	678.6898	100-Year	24.44	81.55	83.57	83.15	83.57	0.000002	0.05	553.05	276.54	0.01
wc5	678.6898	5-Year	9.83	81.55	83.69	82.60	83.69	0.000000	0.02	585.77	298.94	0.00
wc5	678.6898	2-Year	5.94	81.55	83.06	82.37	83.10	0.000995	0.93	6.52	6.36	0.28
wc5	665	100-Year	24.44	81.40	83.57	82.83	83.57	0.000037	0.22	221.28	388.44	0.06
wc5	665	5-Year	9.83	81.40	83.69	82.54	83.69	0.000004	0.07	266.57	388.44	0.02
wc5	665	2-Year	5.94	81.40	83.07	82.34	83.07	0.000045	0.18	66.24	177.89	0.06
wc5	660	100-Year	24.44	81.32	83.52	83.52	83.57	0.011856	1.55	36.93	338.60	0.80
wc5	660	5-Year	9.83	81.32	82.91	82.91	83.62	0.012291	3.72	2.64	7.15	1.01

HEC-RAS Plan: 5&6 BSS1-Ultimate River: wc56centreline Reach: wc5 (Continued)

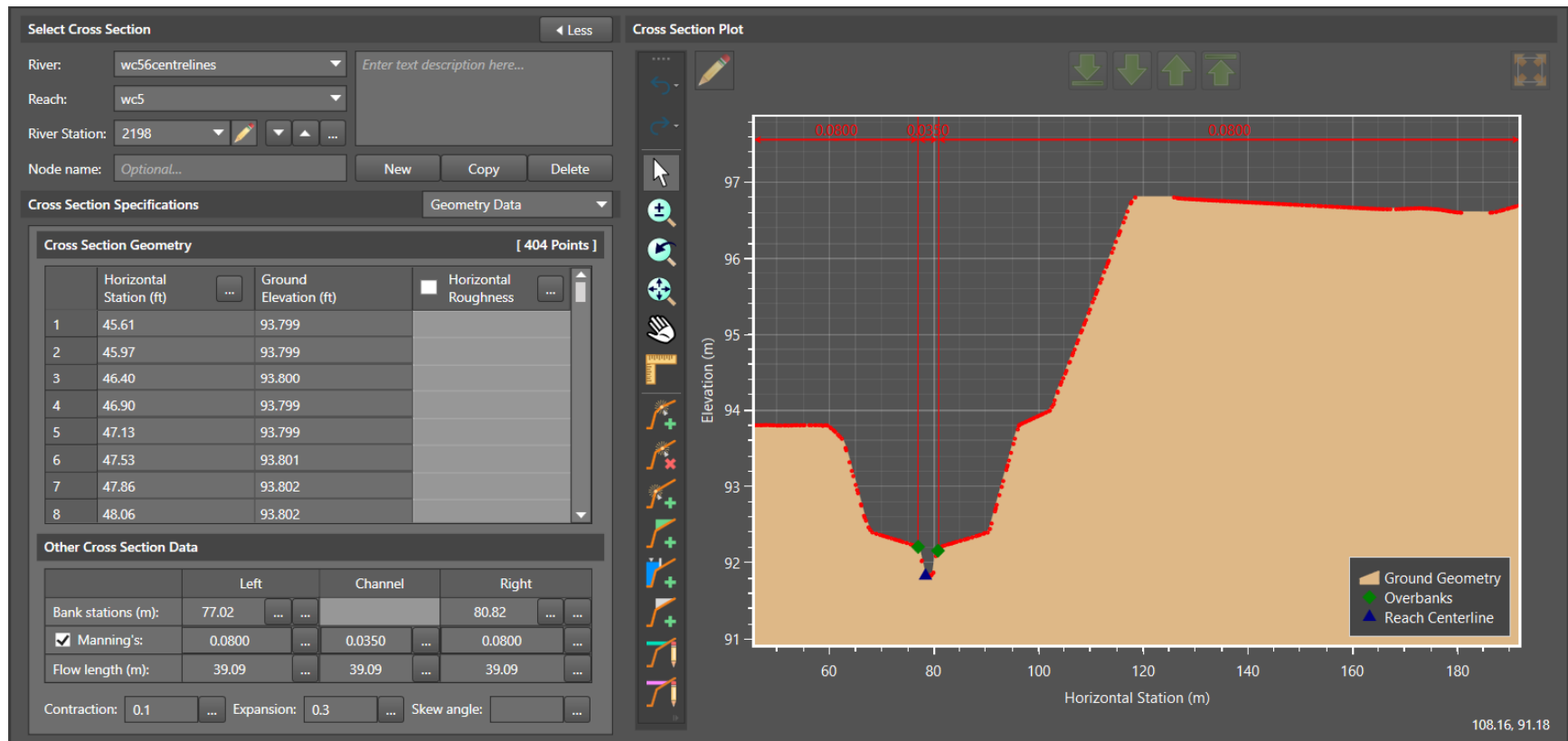
Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	660	2-Year	5.94	81.32	82.52	82.52	83.02	0.013569	3.13	1.90	5.53	1.00
wc5	655		Culvert									
wc5	651.8919	100-Year	24.44	80.93	83.48	83.48	83.52	0.003242	1.52	65.49	496.40	0.49
wc5	651.8919	5-Year	9.83	80.93	82.32	82.32	83.00	0.011197	3.67	2.68	387.46	1.00
wc5	651.8919	2-Year	5.94	80.93	81.92	81.92	82.42	0.012580	3.11	1.91	5.47	1.00
wc5	648.3854	100-Year	24.44	80.78	82.63	81.93	82.63	0.000002	0.05	685.55	481.45	0.01
wc5	648.3854	5-Year	9.83	80.78	81.84	81.84	82.17	0.014452	2.56	3.88	7.02	0.98
wc5	648.3854	2-Year	5.94	80.78	81.60	81.60	81.87	0.016365	2.30	2.58	4.79	1.00
wc5	553.6066	100-Year	24.44	80.14	82.63	81.56	82.63	0.000002	0.06	663.32	479.87	0.01
wc5	553.6066	5-Year	9.83	80.14	81.80	81.14	81.80	0.000303	0.45	42.18	151.42	0.15
wc5	553.6066	2-Year	5.94	80.14	81.35	80.96	81.39	0.002050	0.88	6.75	11.72	0.37
wc5	521.5115	100-Year	24.44	80.04	82.63	81.68	82.63	0.000003	0.08	562.10	343.24	0.02
wc5	521.5115	5-Year	9.83	80.04	81.80	81.10	81.80	0.000005	0.07	278.33	340.48	0.02
wc5	521.5115	2-Year	5.94	80.04	81.28	80.86	81.35	0.002448	1.22	5.19	8.86	0.42
wc5	518.7136	100-Year	23.86	79.98	81.76	81.76	82.55	0.011269	3.95	6.04	342.02	1.00
wc5	518.7136	5-Year	11.06	79.98	81.55	81.12	81.78	0.003826	2.10	5.27	27.82	0.57
wc5	518.7136	2-Year	6.88	79.98	81.13	80.86	81.31	0.005071	1.89	3.64	6.98	0.62
wc5	503.04		Culvert									
wc5	487.5449	100-Year	23.86	79.68	81.38	81.38	82.18	0.010823	3.95	6.04	417.08	1.00
wc5	487.5449	5-Year	11.06	79.68	80.75	80.75	81.22	0.012802	3.05	3.62	12.90	1.00
wc5	487.5449	2-Year	6.88	79.68	80.58	80.48	80.85	0.009250	2.29	3.00	11.00	0.82
wc5	484.1846	100-Year	23.86	79.63	81.06	80.89	81.12	0.002393	1.45	31.20	77.64	0.44
wc5	484.1846	5-Year	11.06	79.63	80.83	80.69	80.88	0.002170	1.17	16.01	52.82	0.40
wc5	484.1846	2-Year	6.88	79.63	80.64	80.39	80.72	0.003426	1.25	7.42	38.34	0.49
wc5	381.2556	100-Year	23.86	79.11	80.87	80.76	80.94	0.002303	1.62	33.61	77.58	0.44
wc5	381.2556	5-Year	11.06	79.11	80.64	80.22	80.71	0.002070	1.36	16.39	70.17	0.40
wc5	381.2556	2-Year	6.88	79.11	80.33	79.99	80.44	0.003637	1.47	4.70	5.58	0.51
wc5	359.8282	100-Year	23.86	78.85	80.65	80.65	80.80	0.004954	2.17	25.48	98.88	0.61
wc5	359.8282	5-Year	11.06	78.85	80.23	80.11	80.53	0.010437	2.43	4.57	5.69	0.83
wc5	359.8282	2-Year	6.88	78.85	80.03	79.84	80.22	0.007788	1.91	3.60	4.72	0.70
wc5	304.0528	100-Year	23.86	78.22	80.06	80.06	80.20	0.004080	2.07	26.81	136.19	0.58
wc5	304.0528	5-Year	11.06	78.22	79.51	79.51	79.79	0.011460	2.42	5.35	10.97	0.89
wc5	304.0528	2-Year	6.88	78.22	79.33	79.33	79.56	0.012711	2.13	3.51	9.27	0.89
wc5	250	100-Year	23.86	77.55	79.86		79.95	0.001536	1.34	21.37	42.47	0.36
wc5	250	5-Year	11.06	77.55	78.58	78.58	78.90	0.015275	2.51	4.41	7.03	1.01
wc5	250	2-Year	6.88	77.55	78.38	78.38	78.63	0.016359	2.24	3.07	6.14	1.01
wc5	230	100-Year	23.86	76.75	79.77	78.35	79.92	0.000969	1.70	14.07	116.19	0.33
wc5	230	5-Year	11.06	76.75	78.42	77.84	78.55	0.002099	1.57	7.04	12.54	0.43
wc5	230	2-Year	6.88	76.75	77.92	77.63	78.04	0.003808	1.55	4.42	9.61	0.54
wc5	215		Culvert									
wc5	200	100-Year	23.86	76.48	78.80		79.07	0.002670	2.30	10.39	15.86	0.52
wc5	200	5-Year	11.06	76.48	78.14		78.27	0.002189	1.59	6.95	11.03	0.44
wc5	200	2-Year	6.88	76.48	77.78		77.87	0.002380	1.35	5.10	8.74	0.43
wc5	170	100-Year	23.86	76.48	78.90	77.76	78.95	0.000501	1.01	29.00	19.29	0.23
wc5	170	5-Year	11.06	76.48	78.18	77.40	78.21	0.000583	0.81	15.85	17.05	0.23
wc5	170	2-Year	6.88	76.48	77.81	77.24	77.83	0.000824	0.76	9.49	12.75	0.25

Cross Section Schematic – Within Block 1

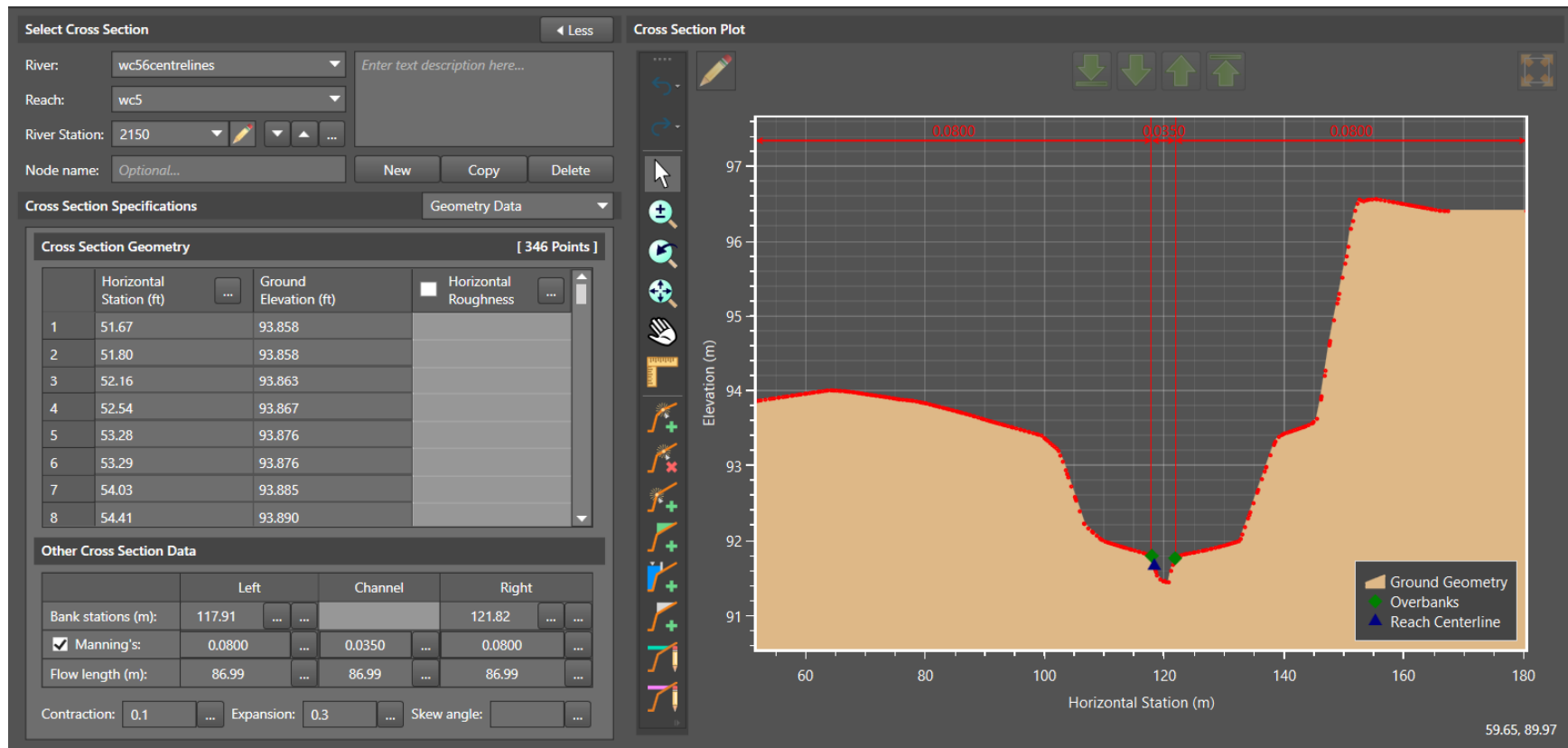
WC5



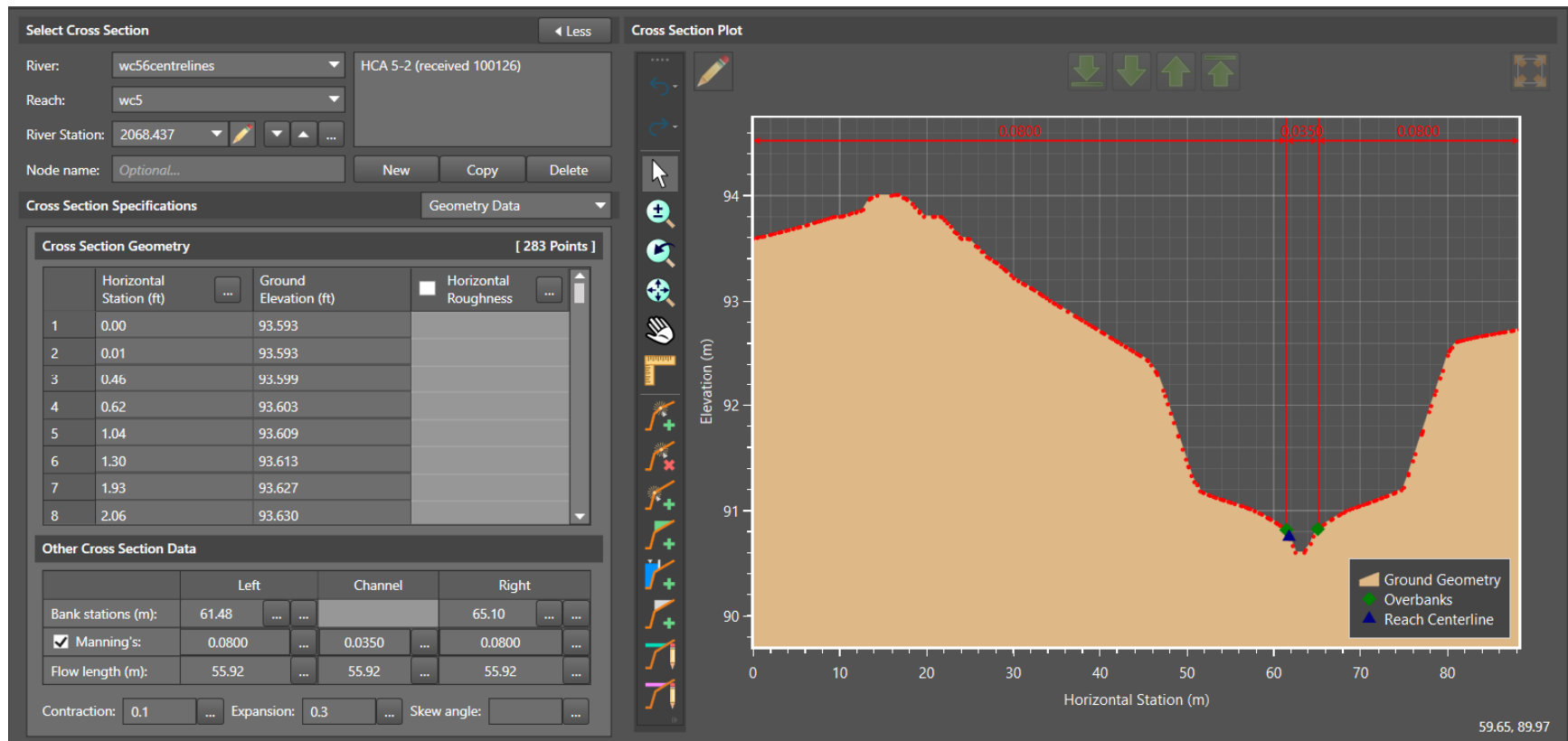
Cross Section Schematic – Within Block 1



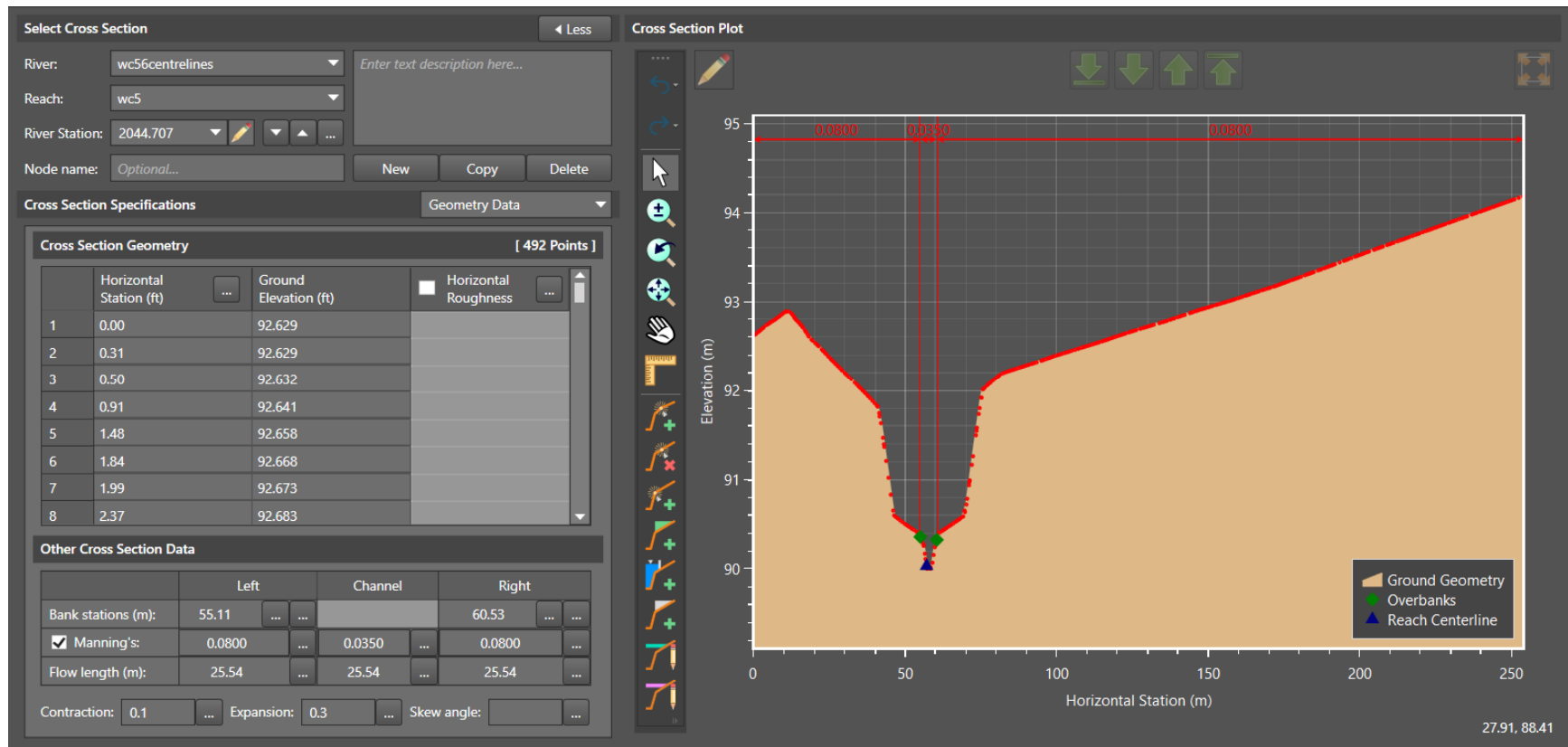
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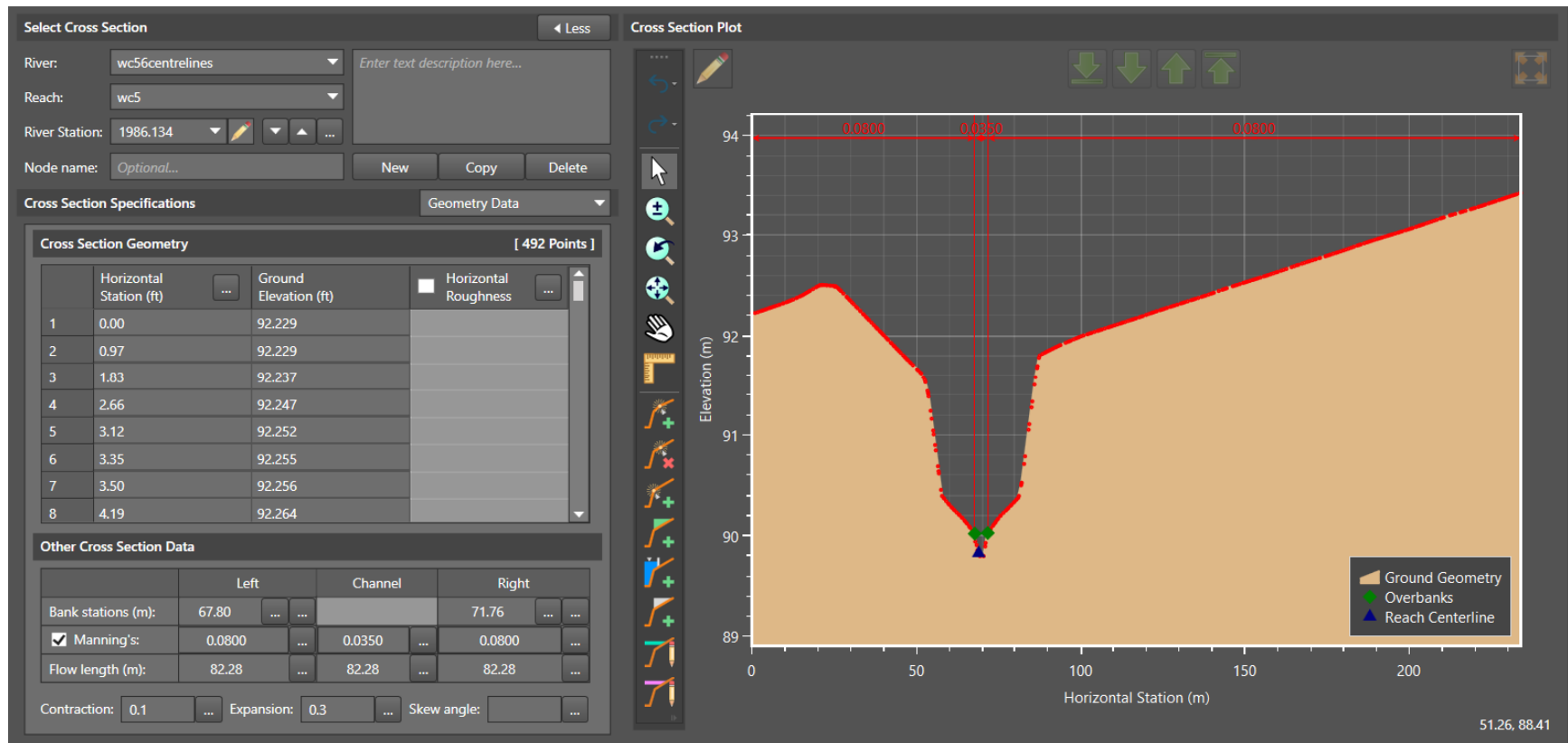
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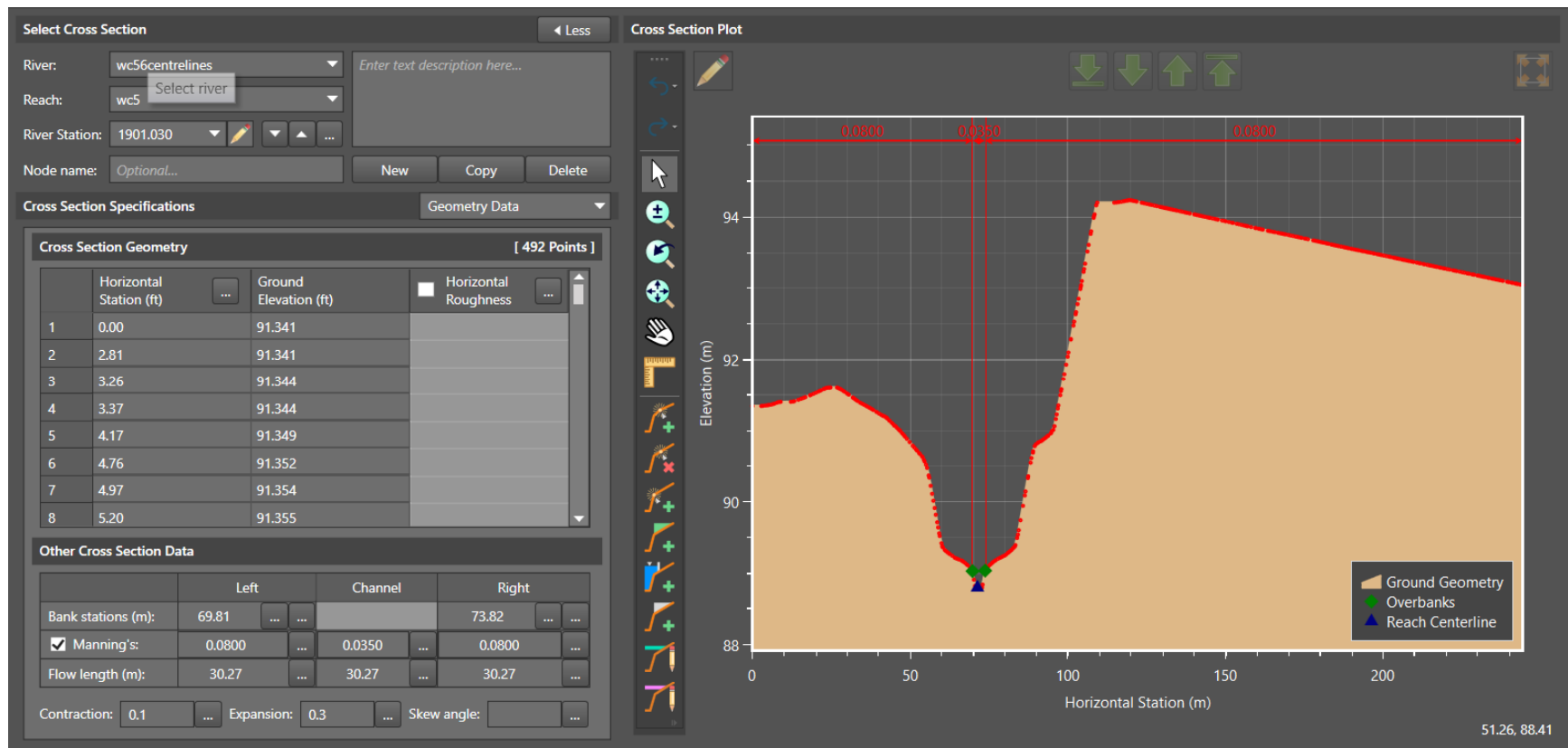
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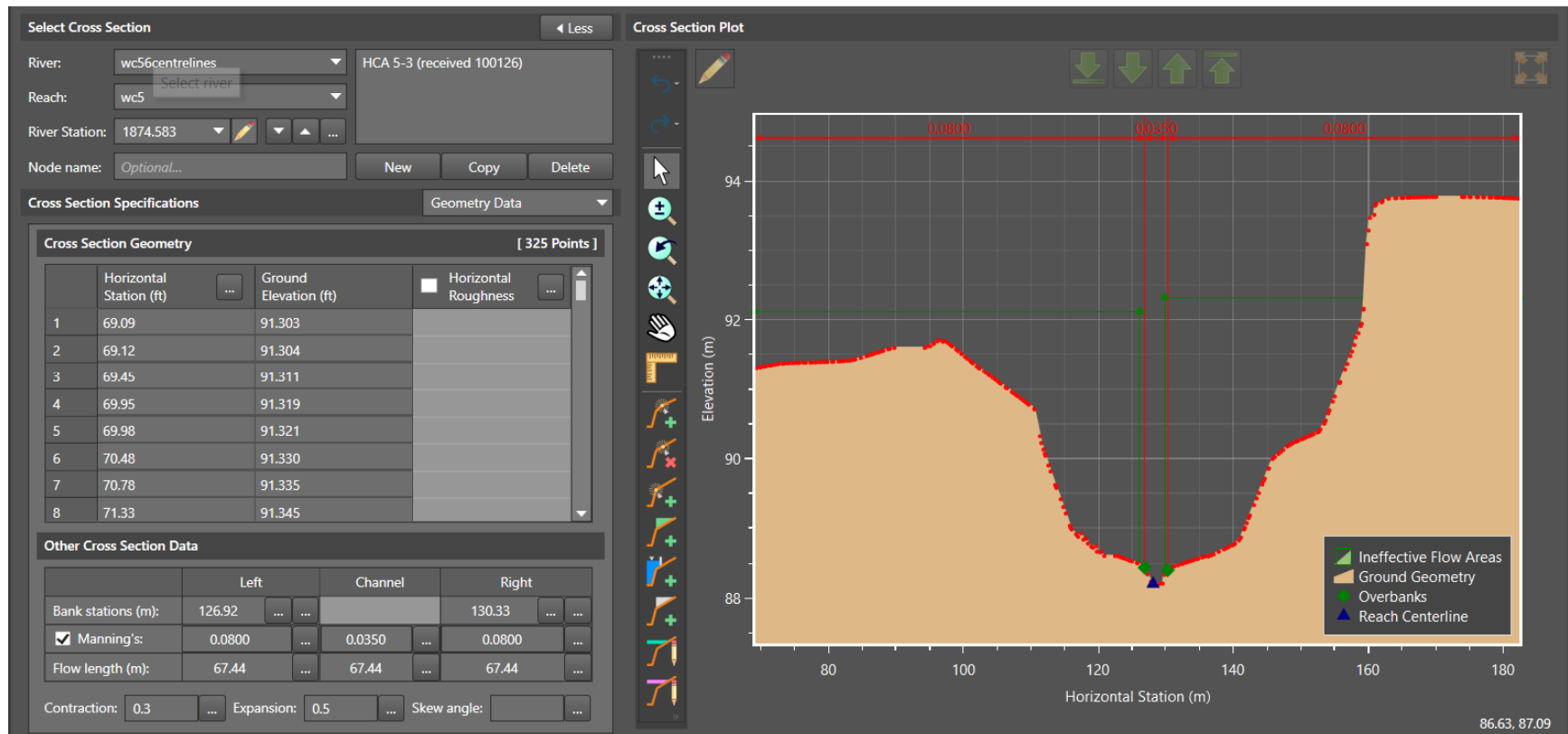
Cross Section Schematic – Within Block 1



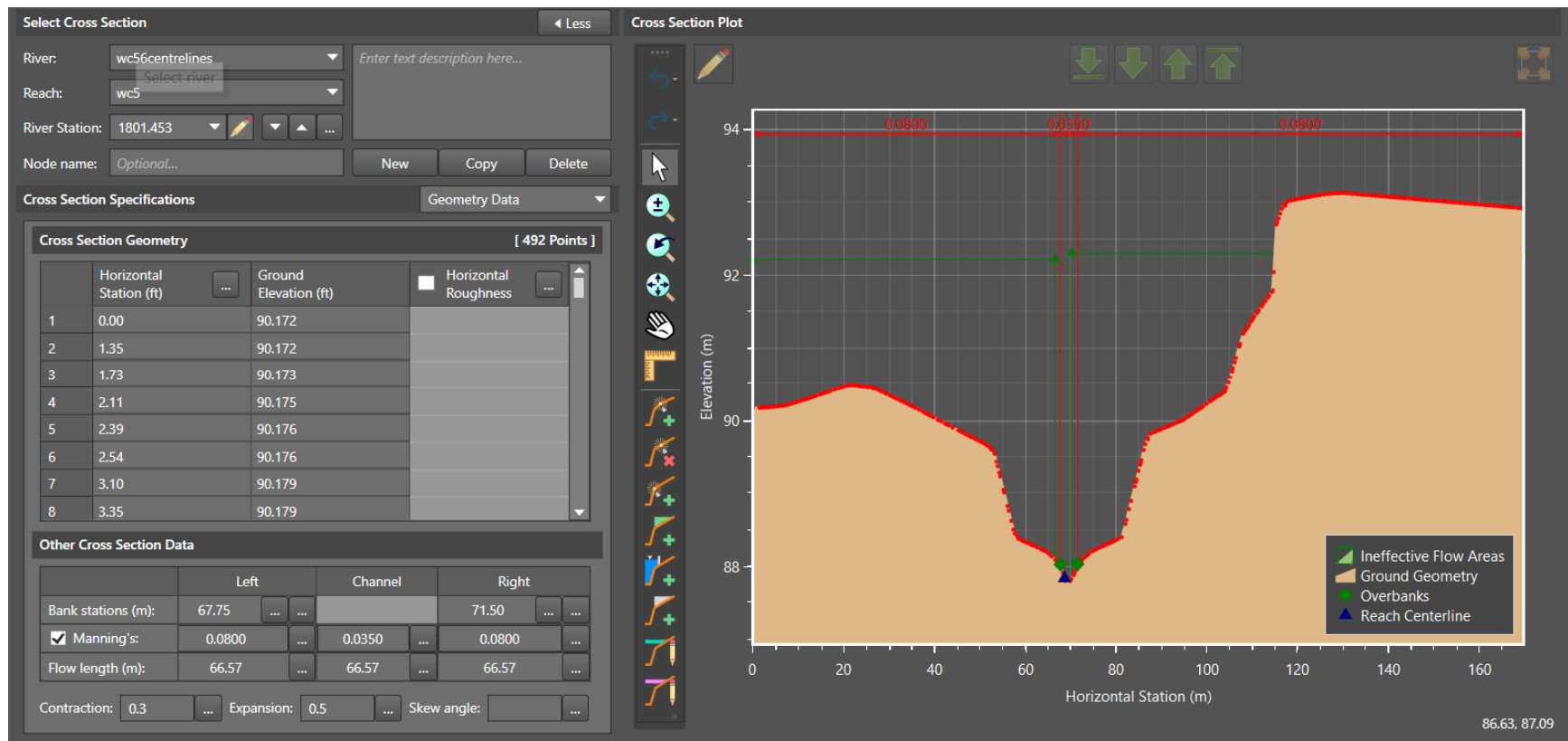
Cross Section Schematic – Within Block 1



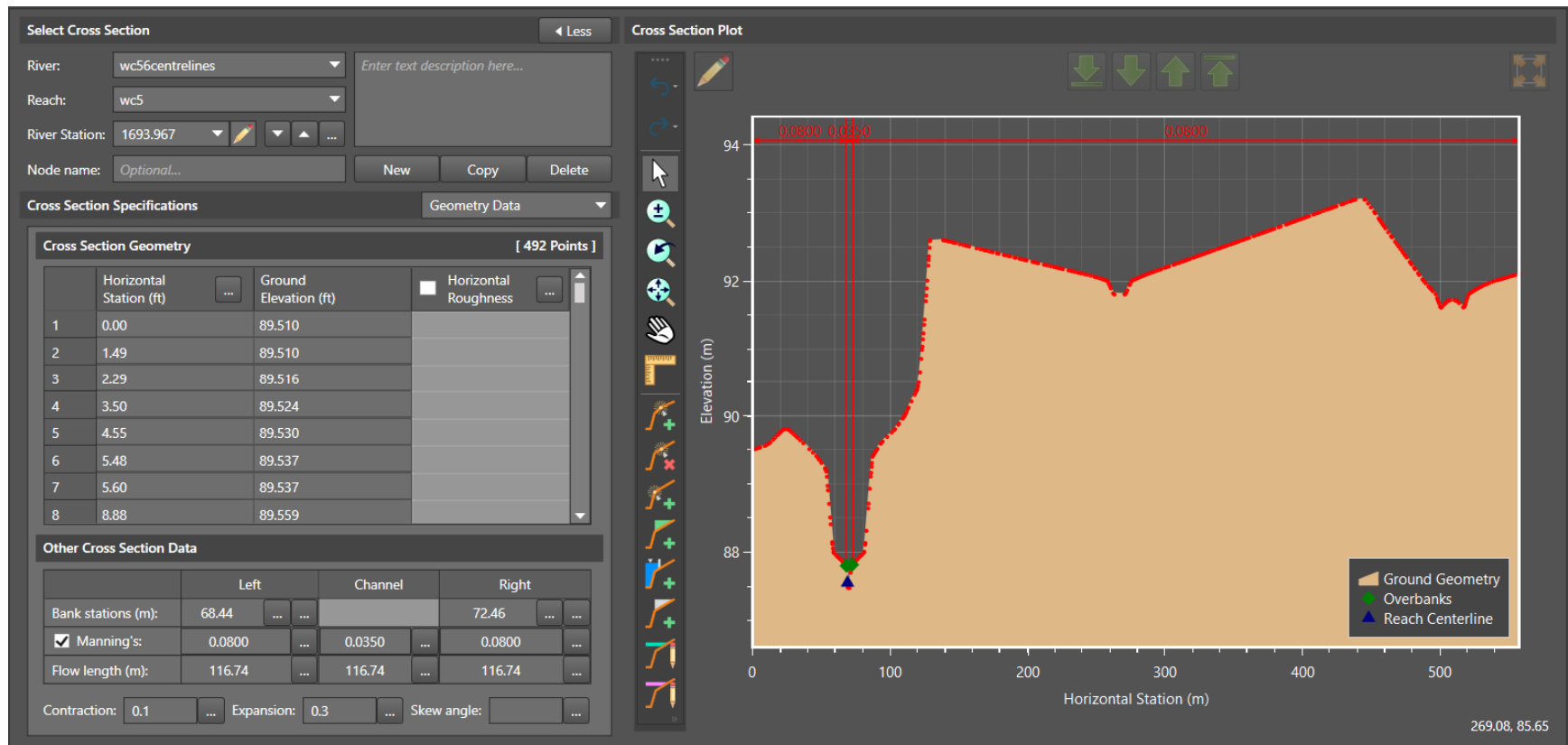
Cross Section Schematic – Within Block 1



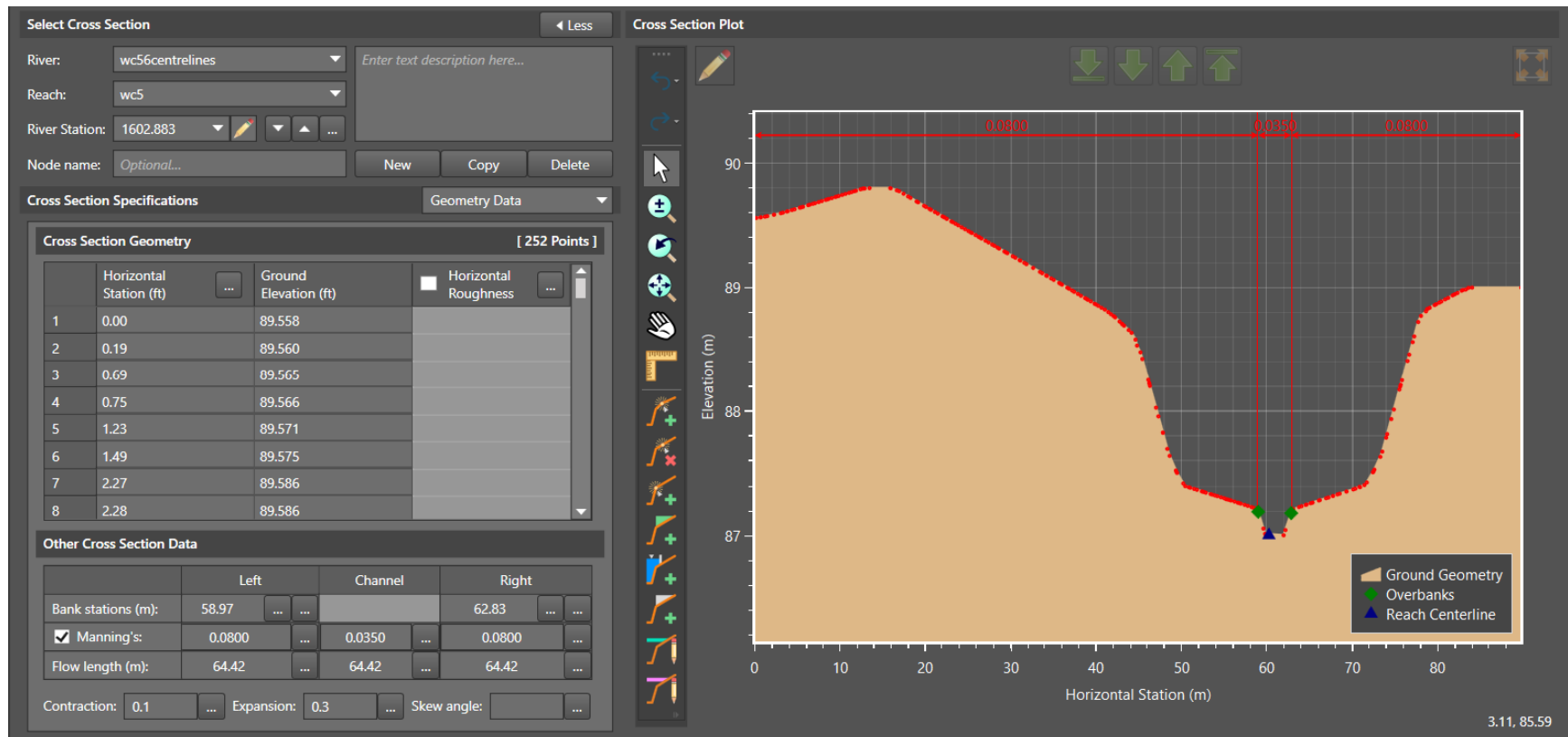
Cross Section Schematic – Within Block 1



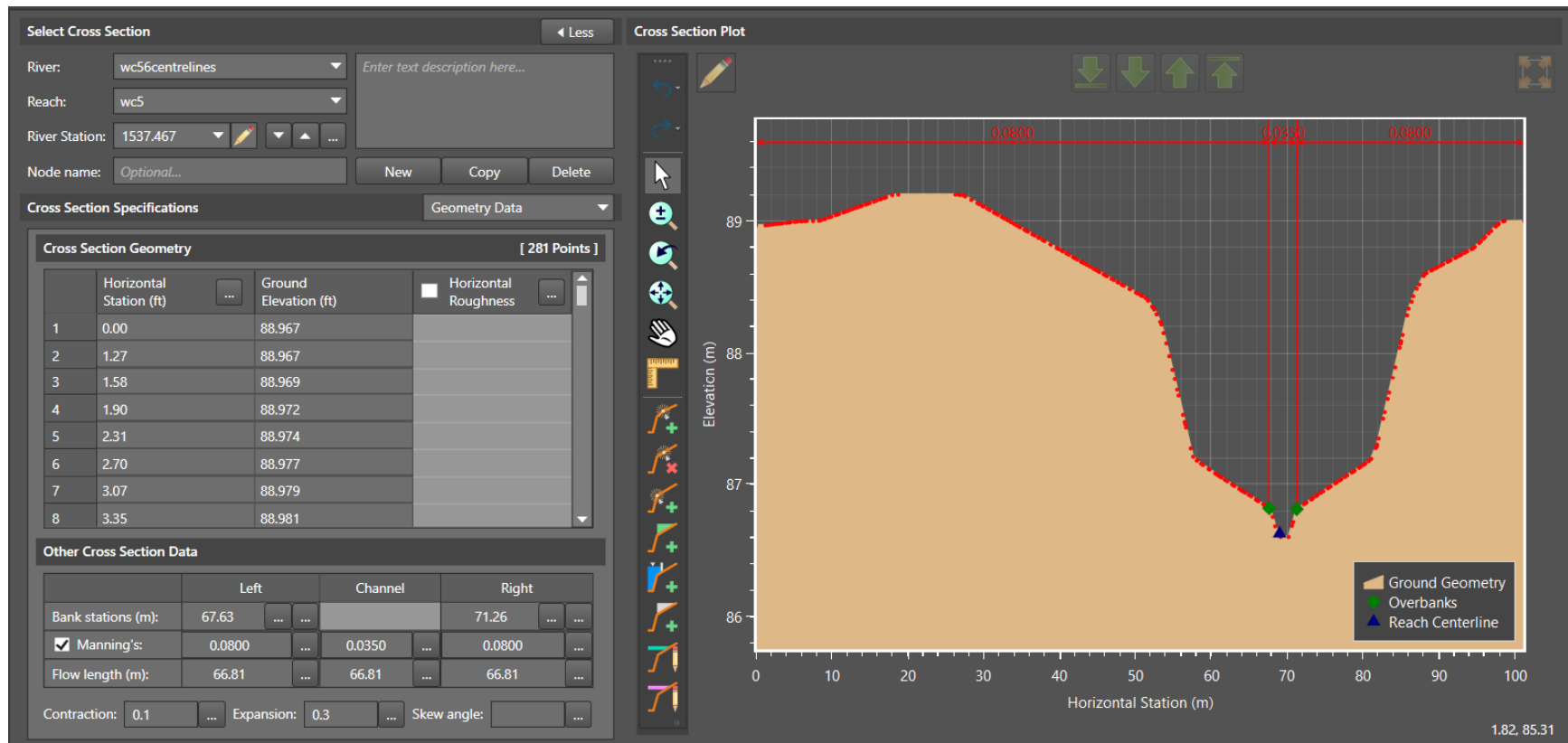
Cross Section Schematic – Within Block 1



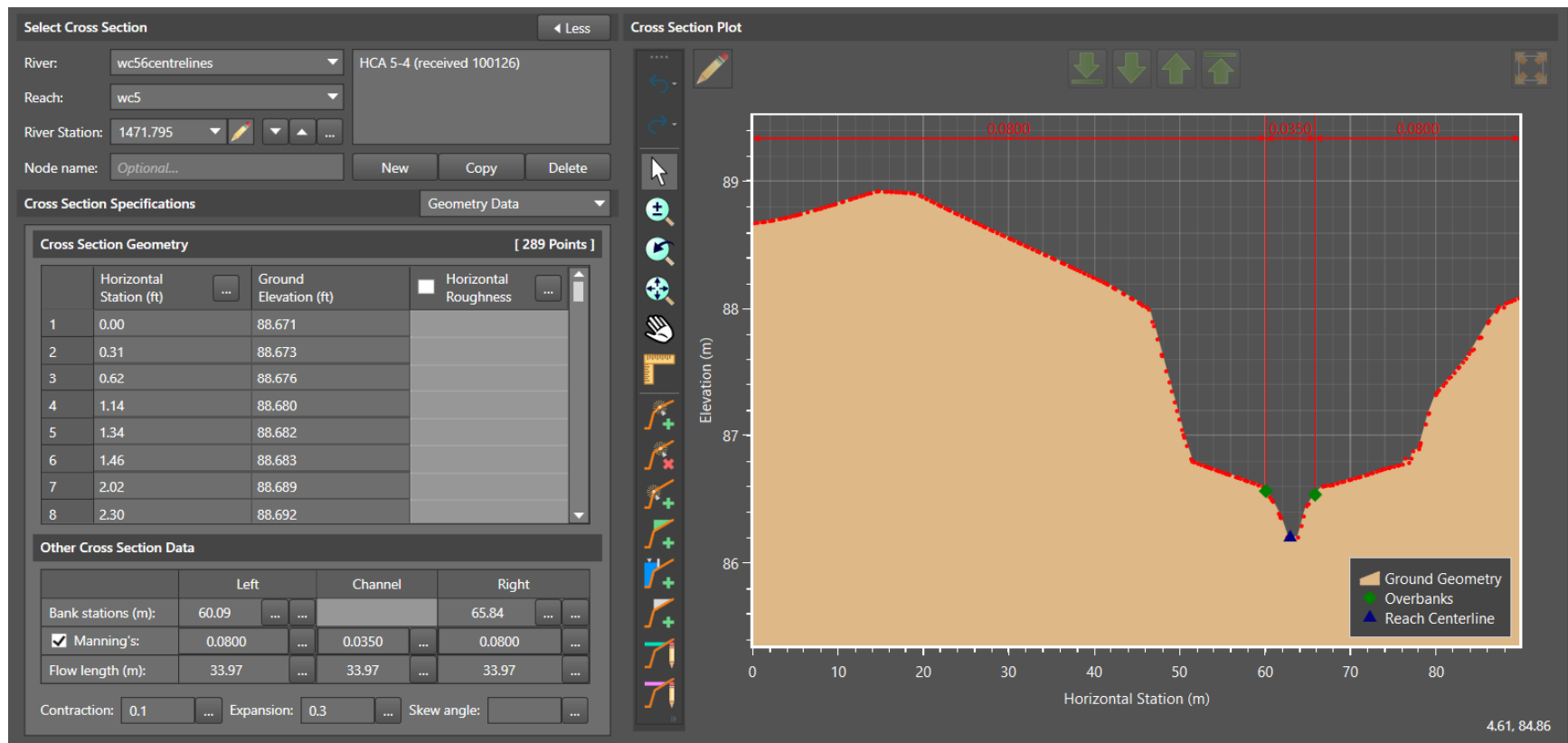
Cross Section Schematic – Within Block 1



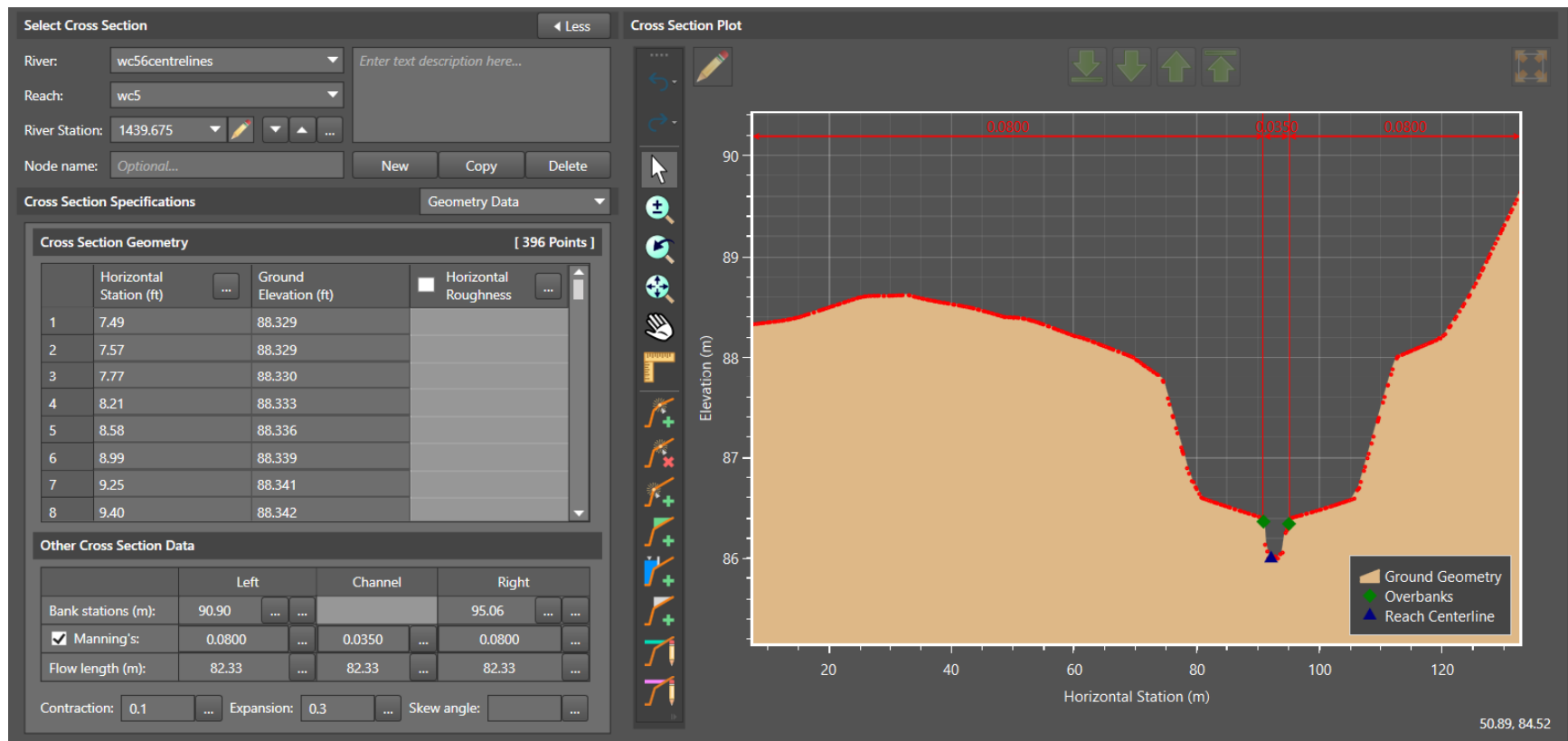
Cross Section Schematic – Within Block 1



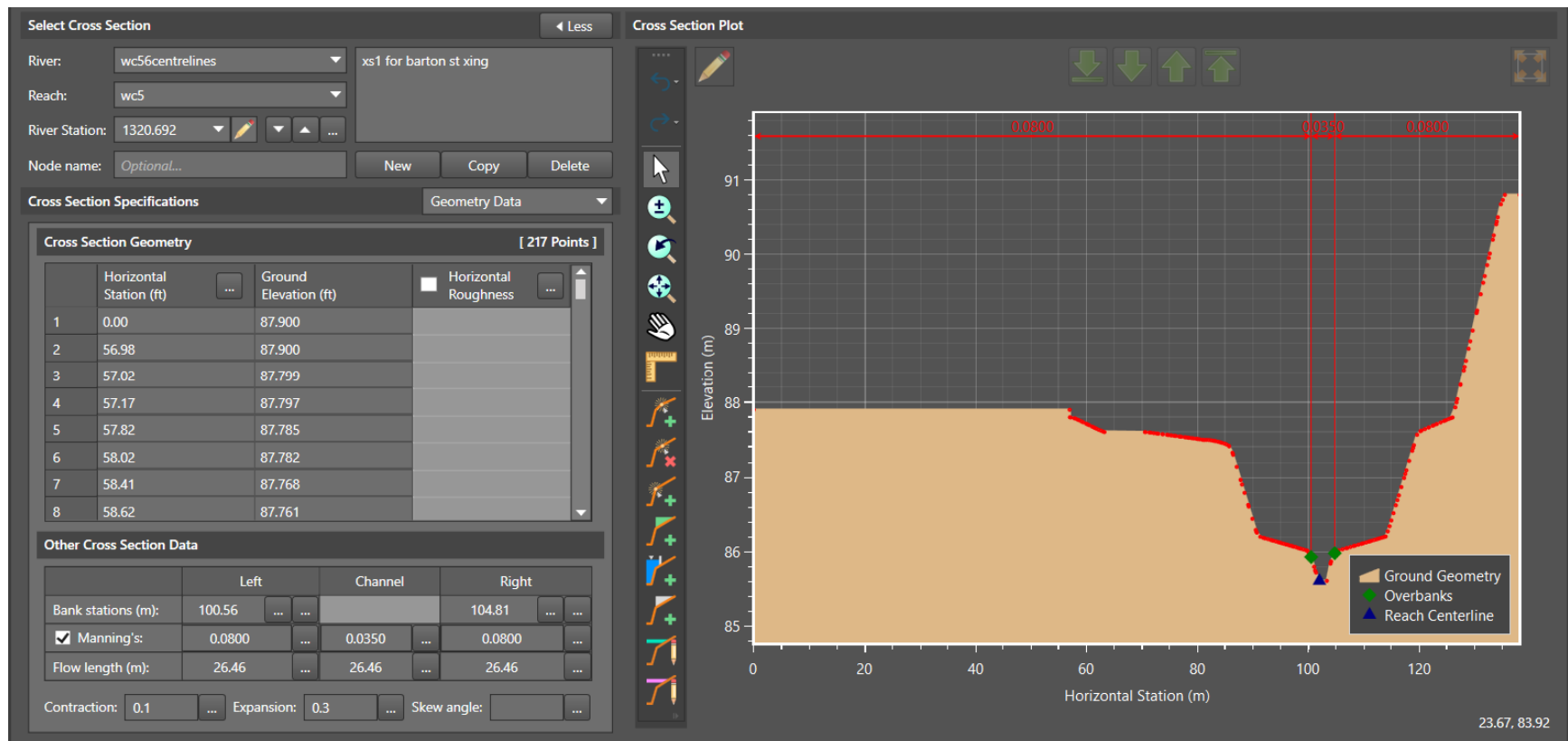
Cross Section Schematic – Within Block 1



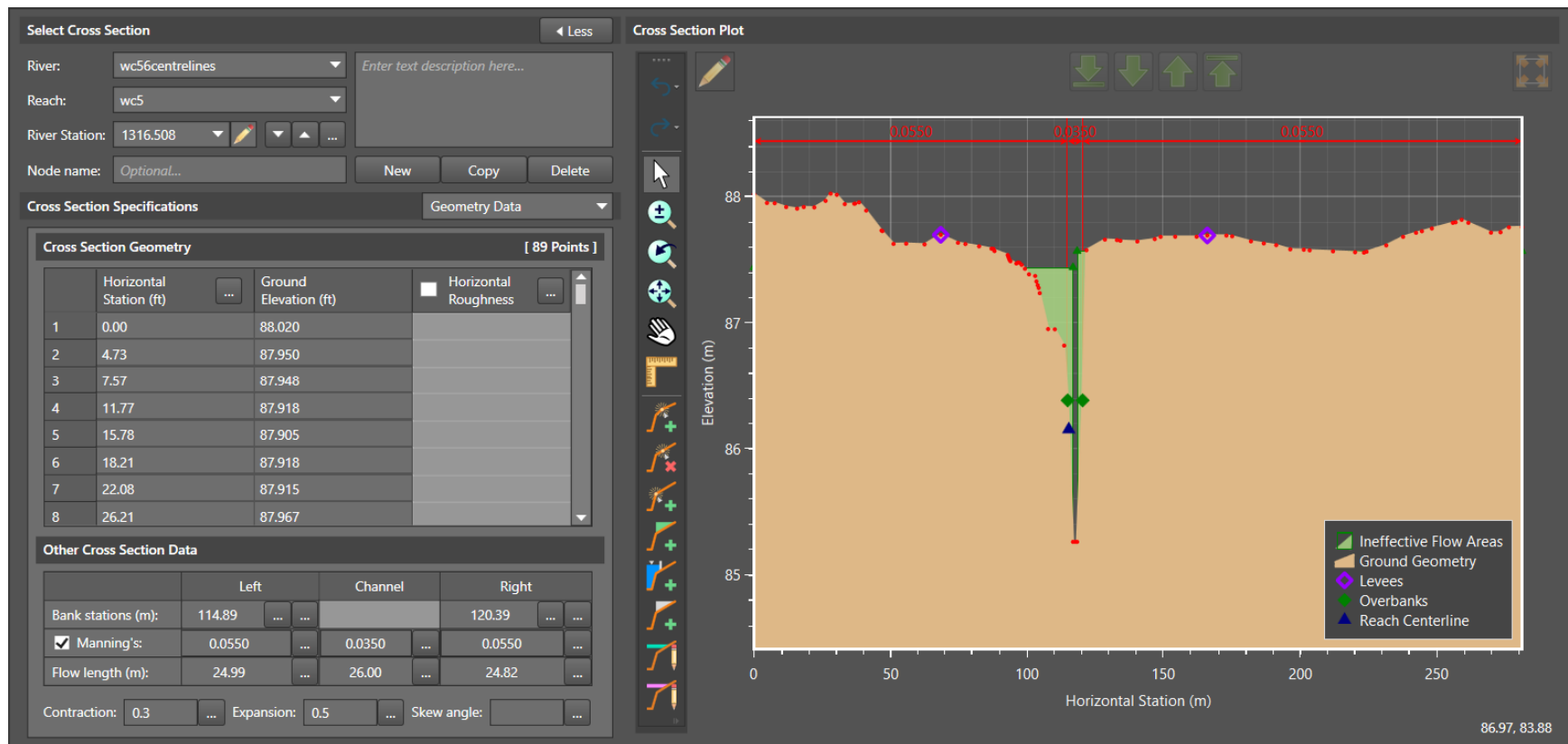
Cross Section Schematic – Within Block 1



Cross Section Schematic – Within Block 1

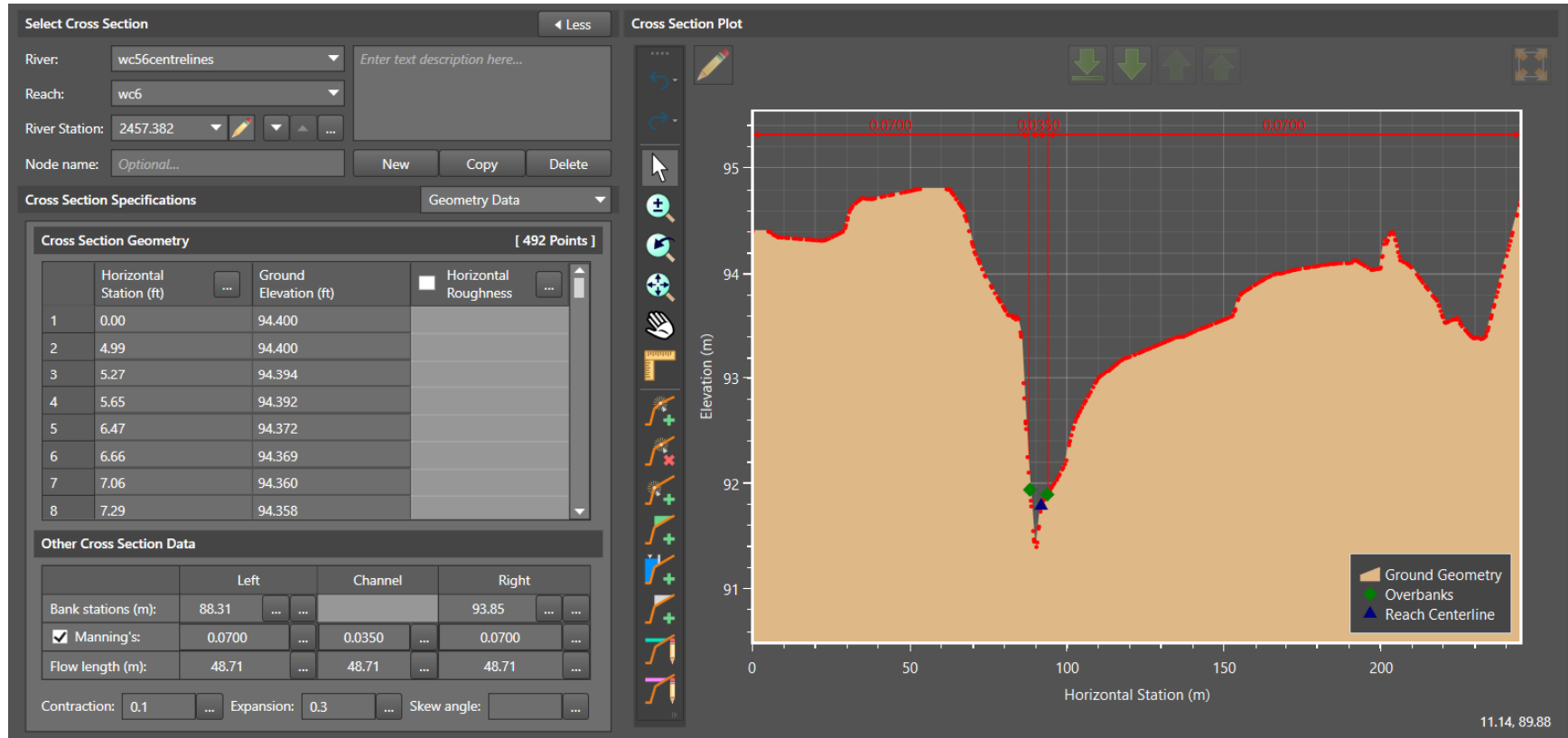


Cross Section Schematic – Within Block 1

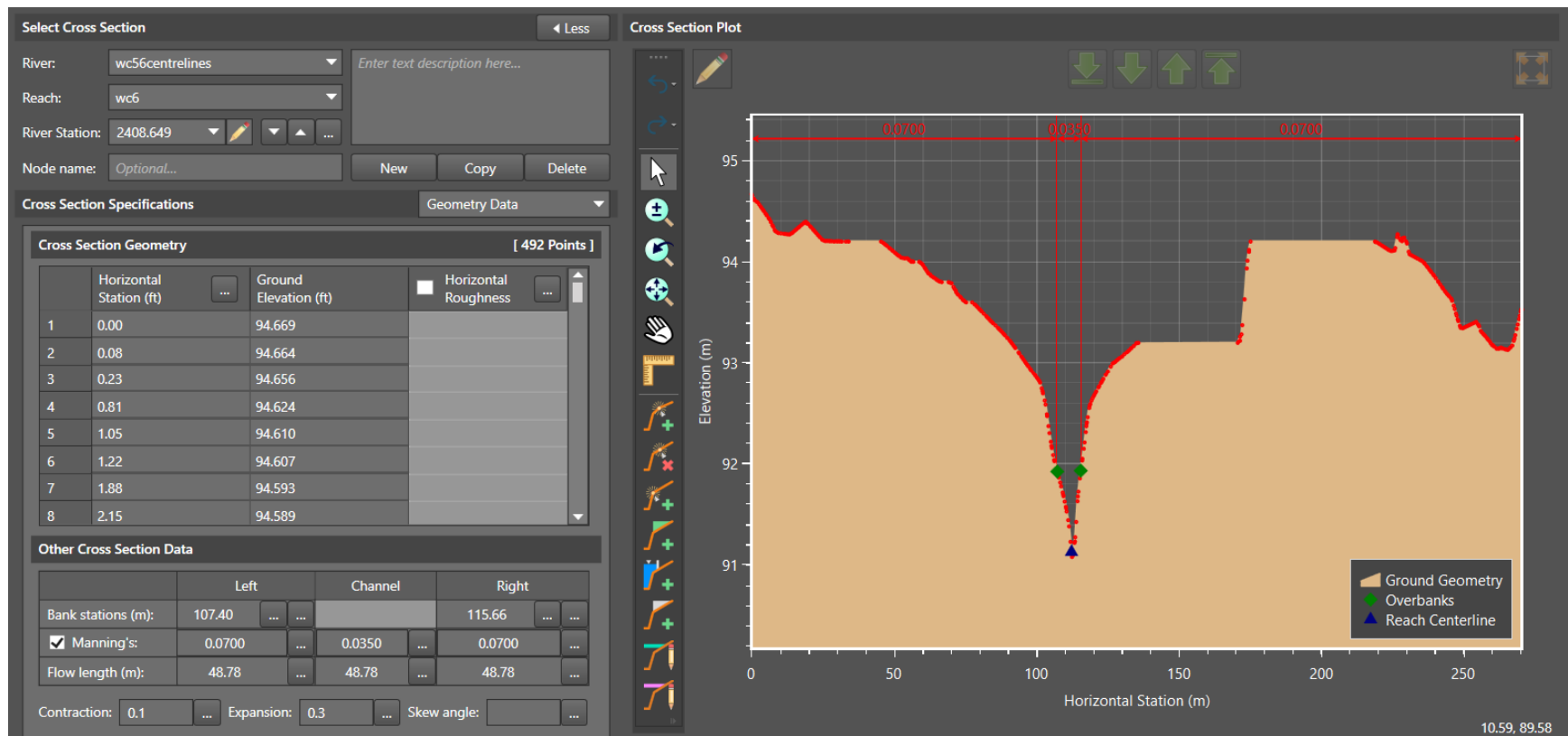


Cross Section Schematic – Within Block 1

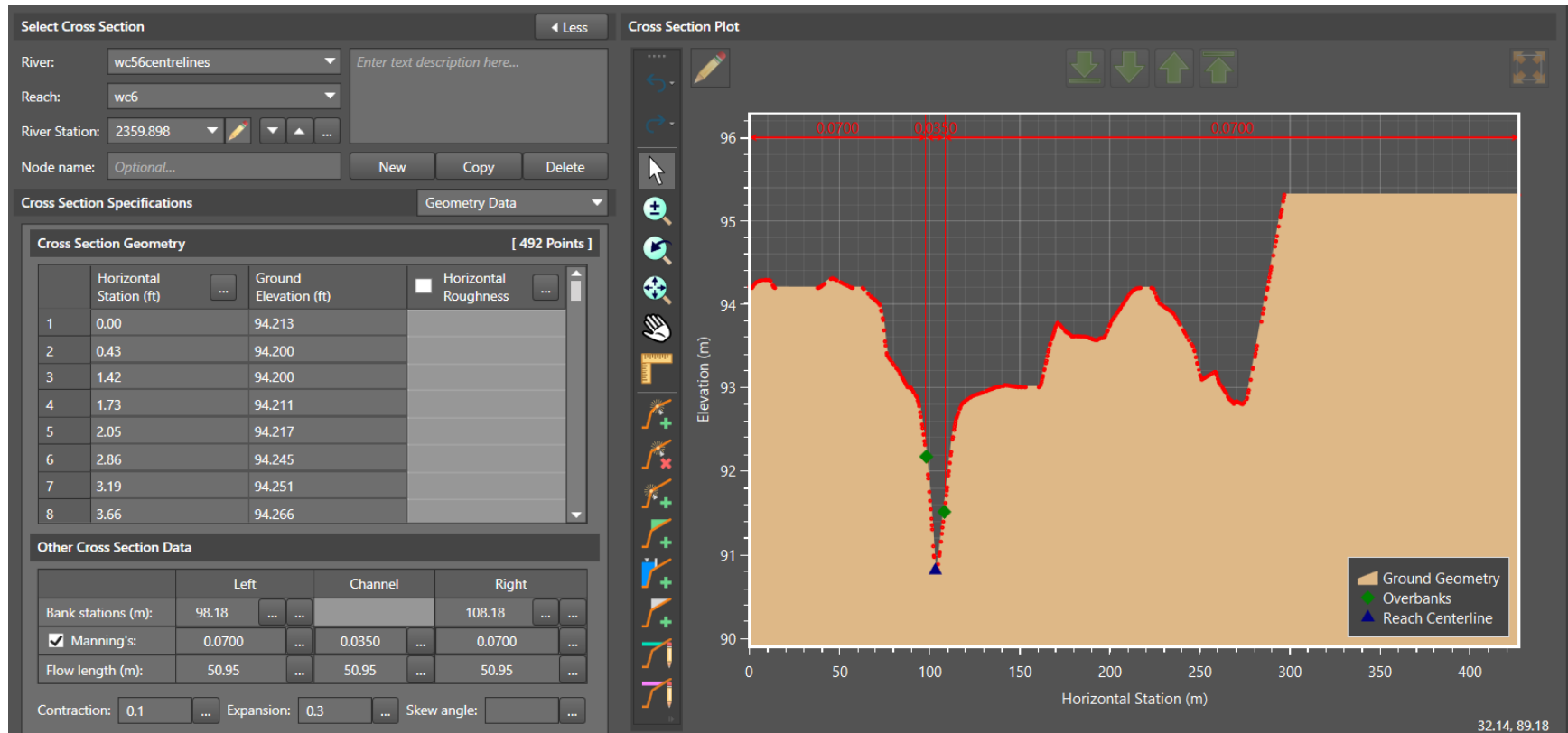
WC6



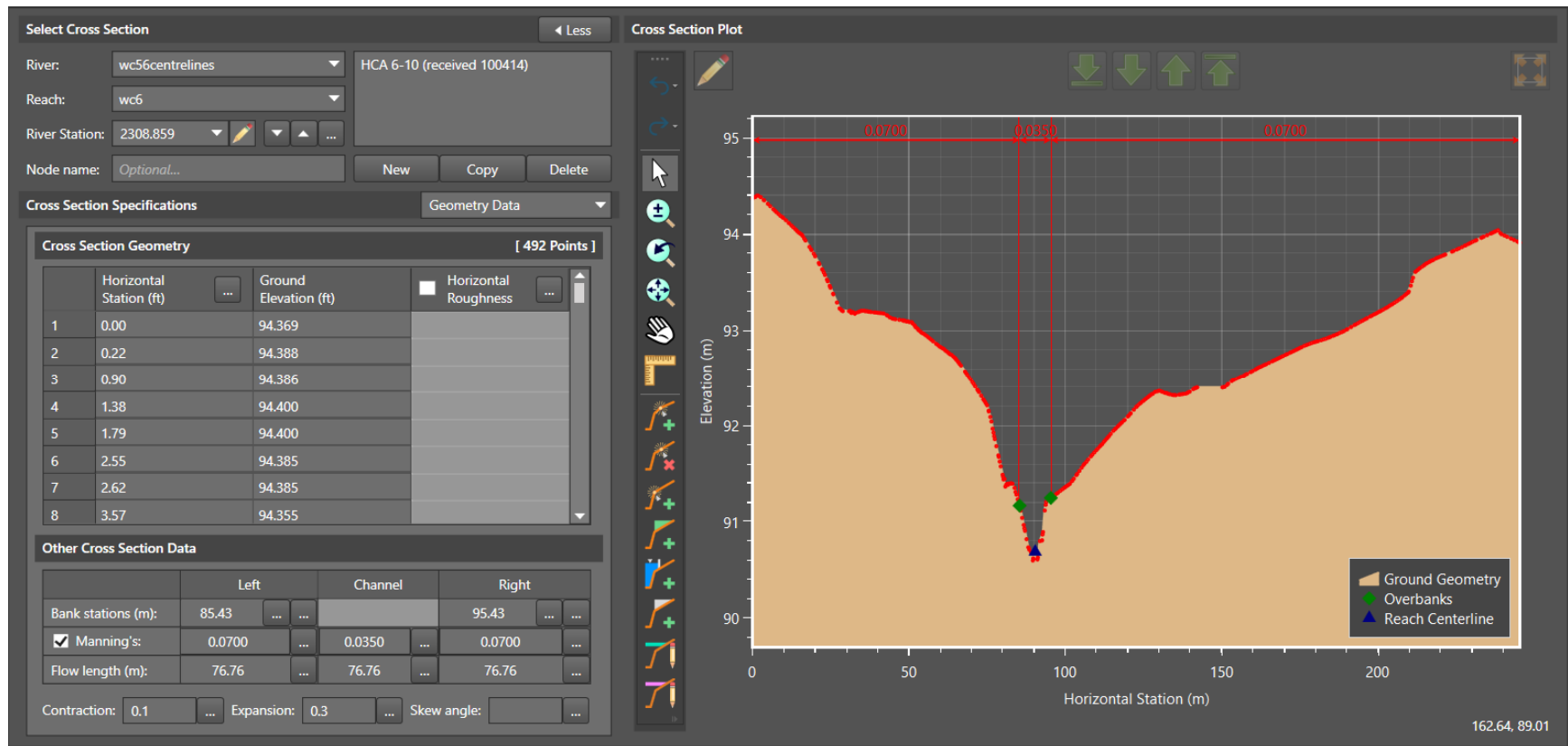
Cross Section Schematic – Within Block 1



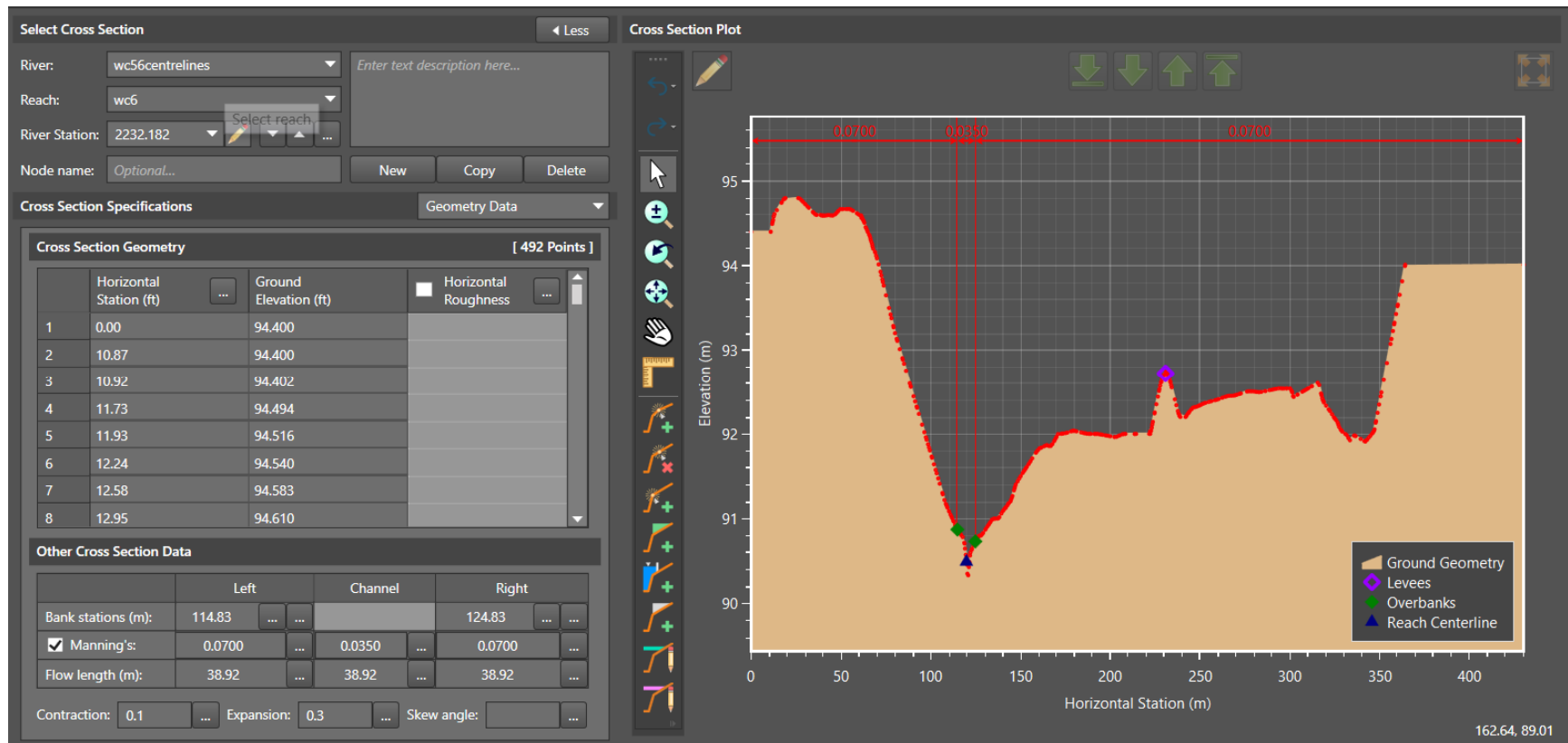
Cross Section Schematic – Within Block 1



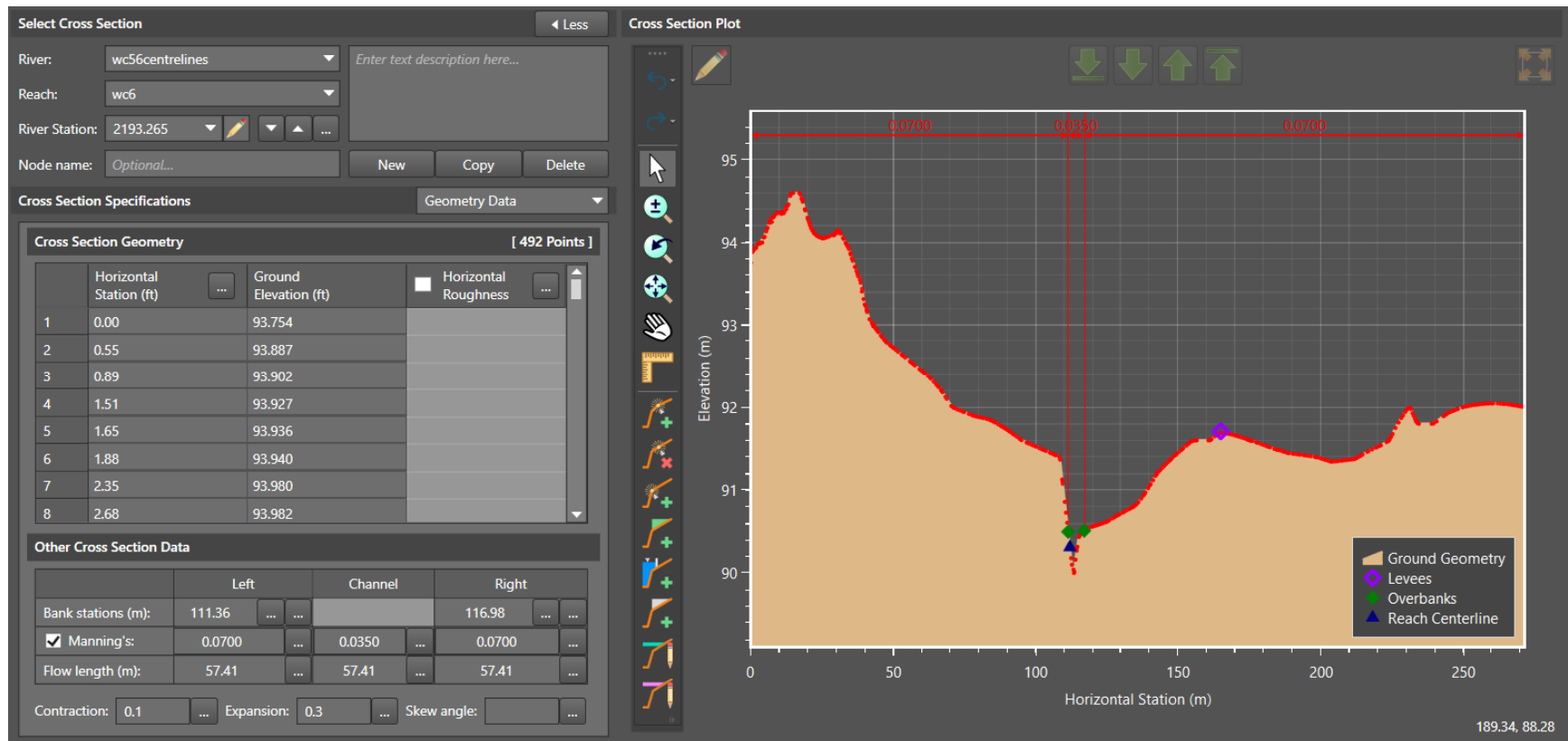
Cross Section Schematic – Within Block 1



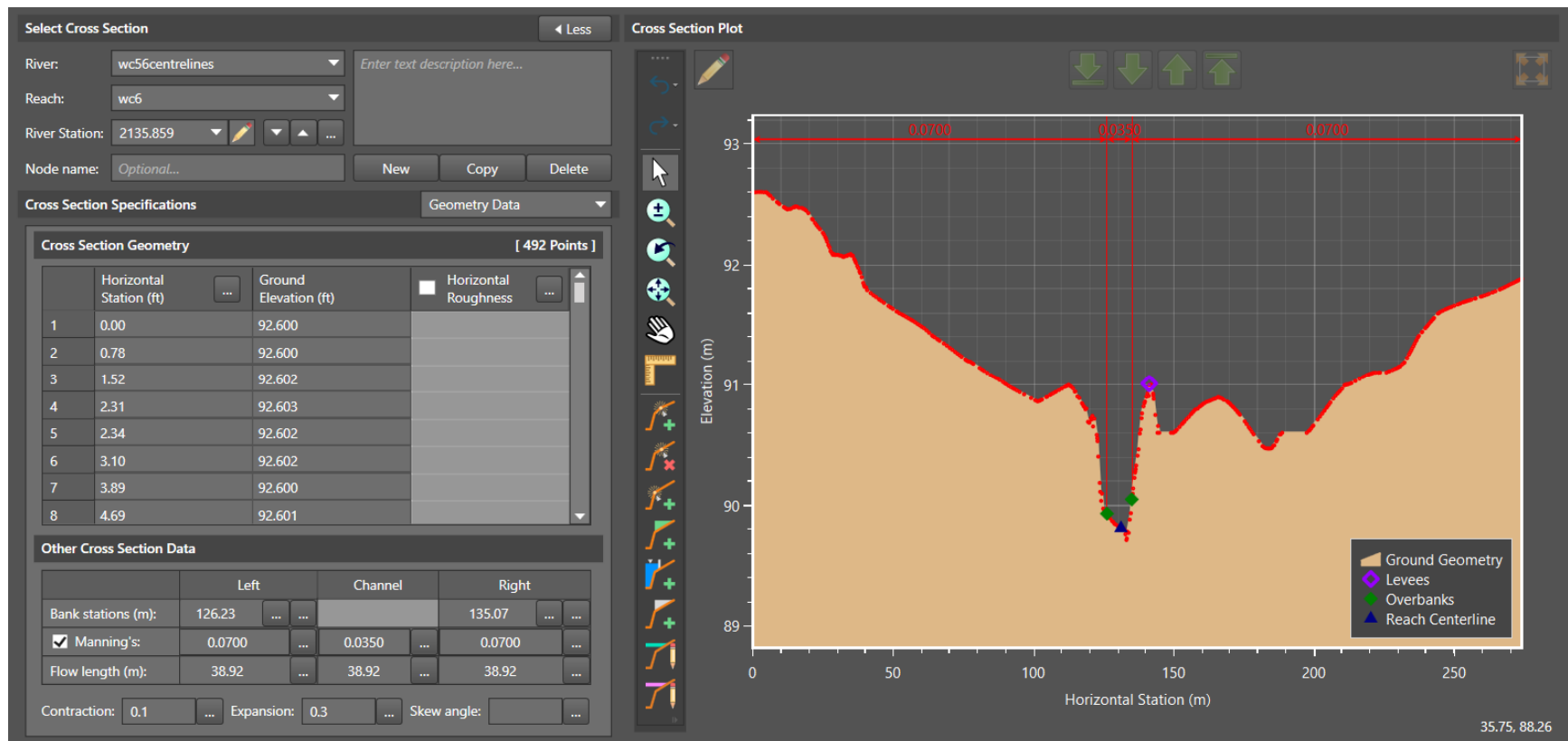
Cross Section Schematic – Within Block 1



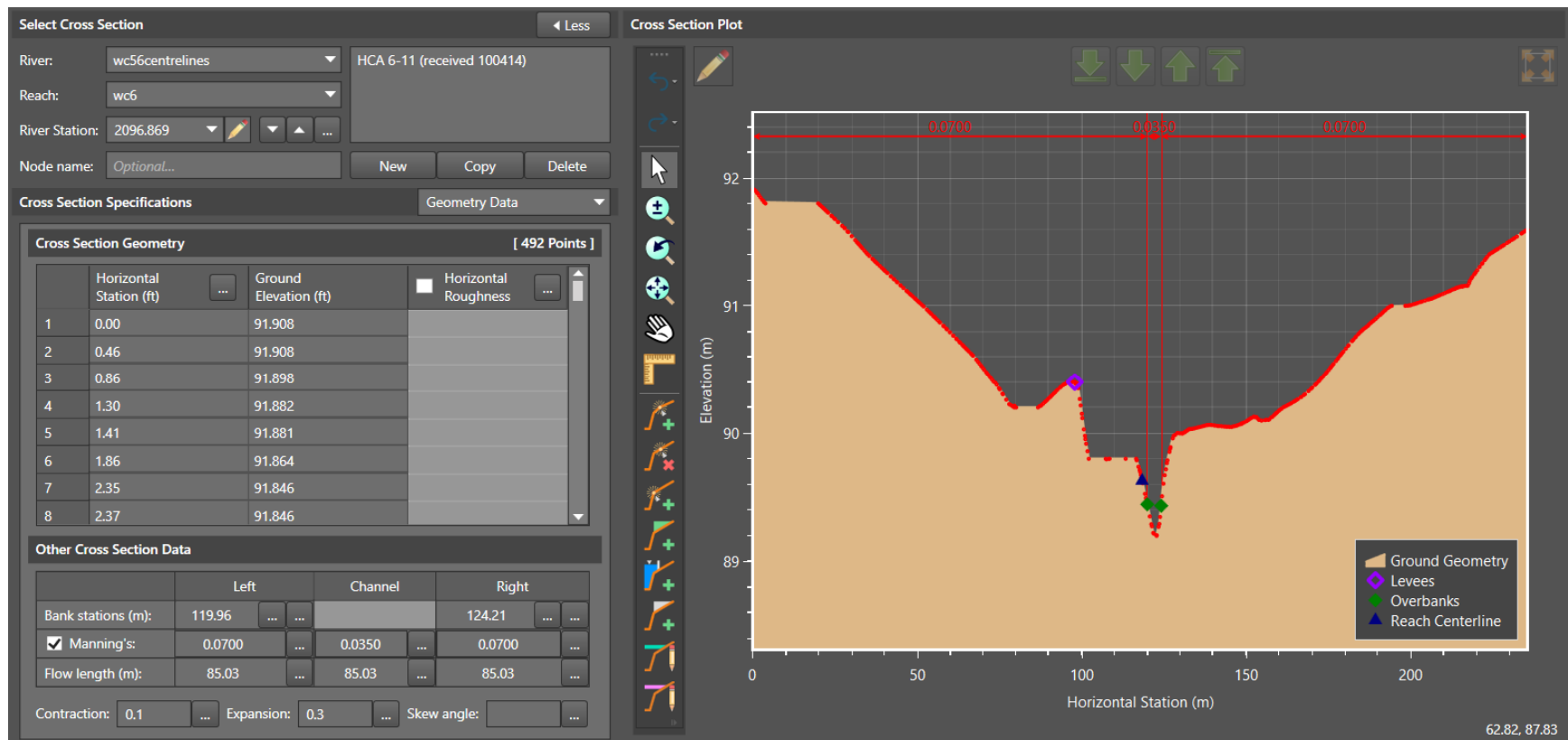
Cross Section Schematic – Within Block 1



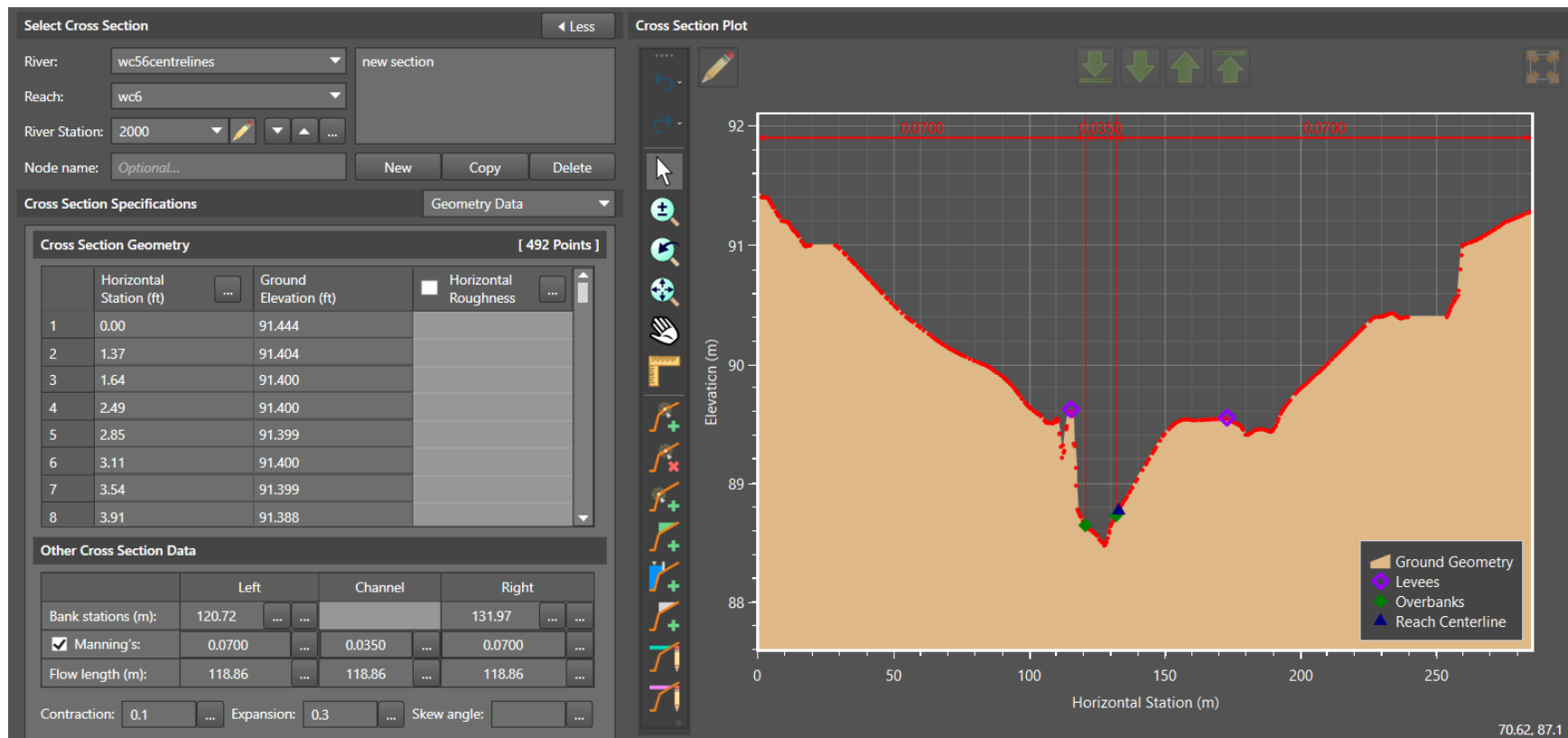
Cross Section Schematic – Within Block 1



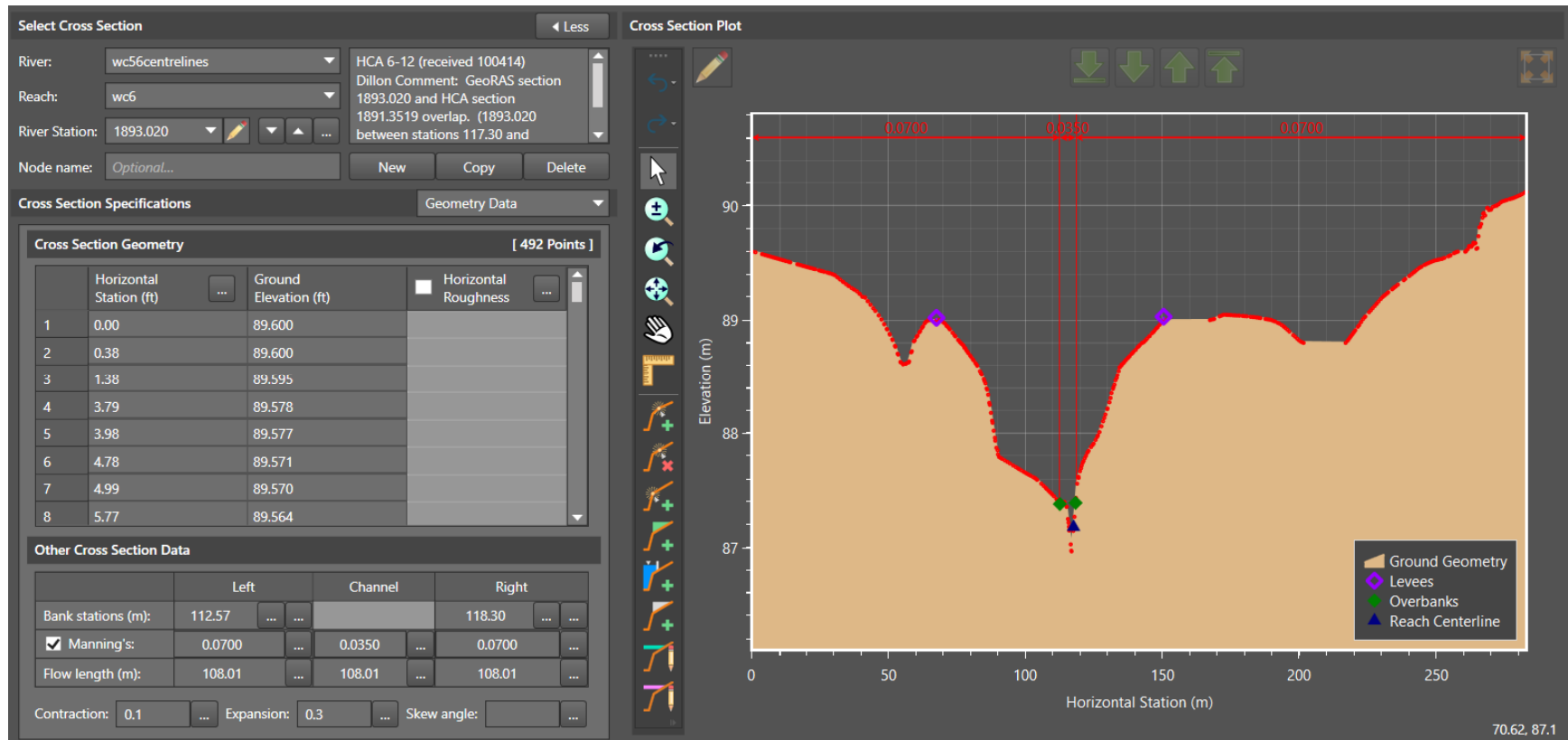
Cross Section Schematic – Within Block 1



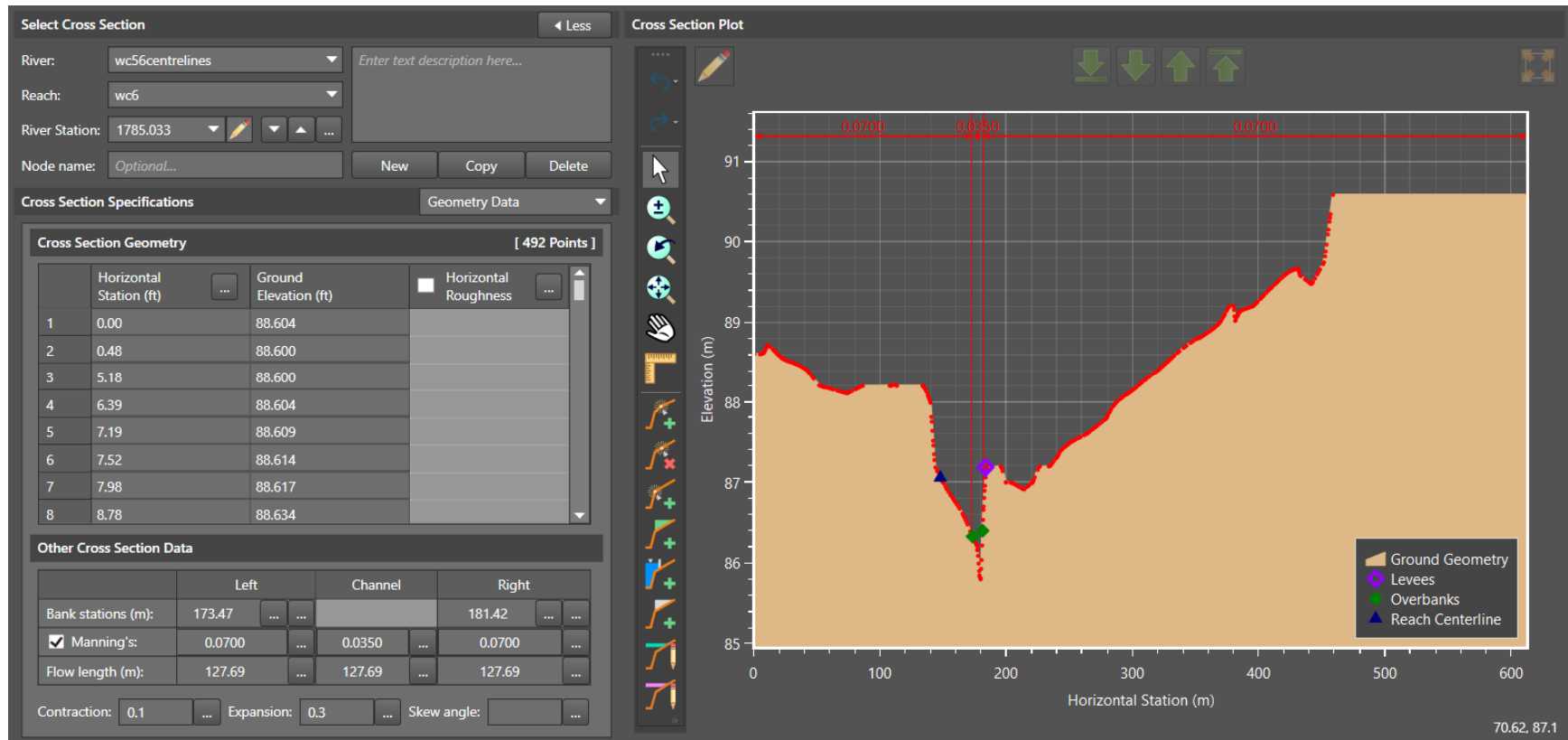
Cross Section Schematic – Within Block 1



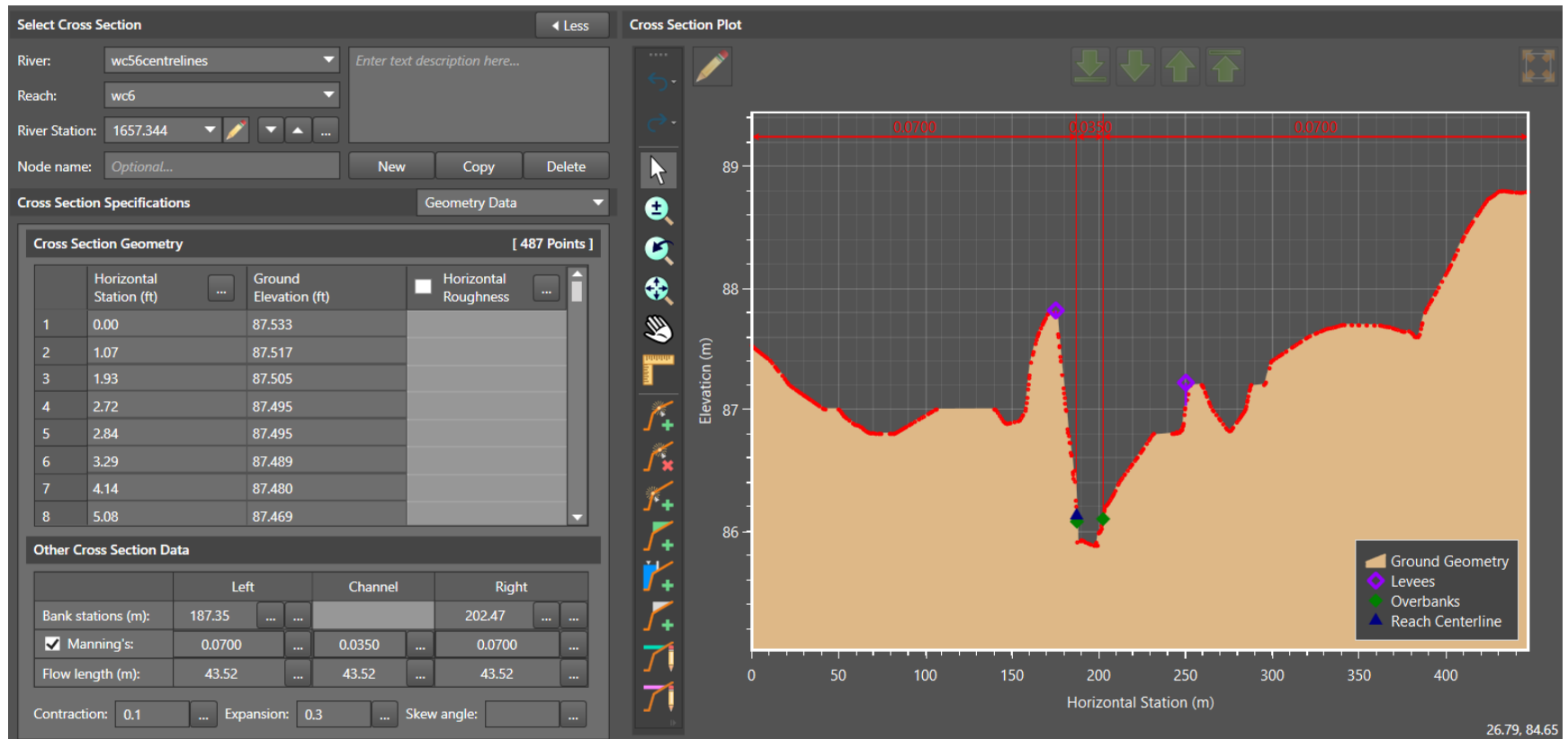
Cross Section Schematic – Within Block 1



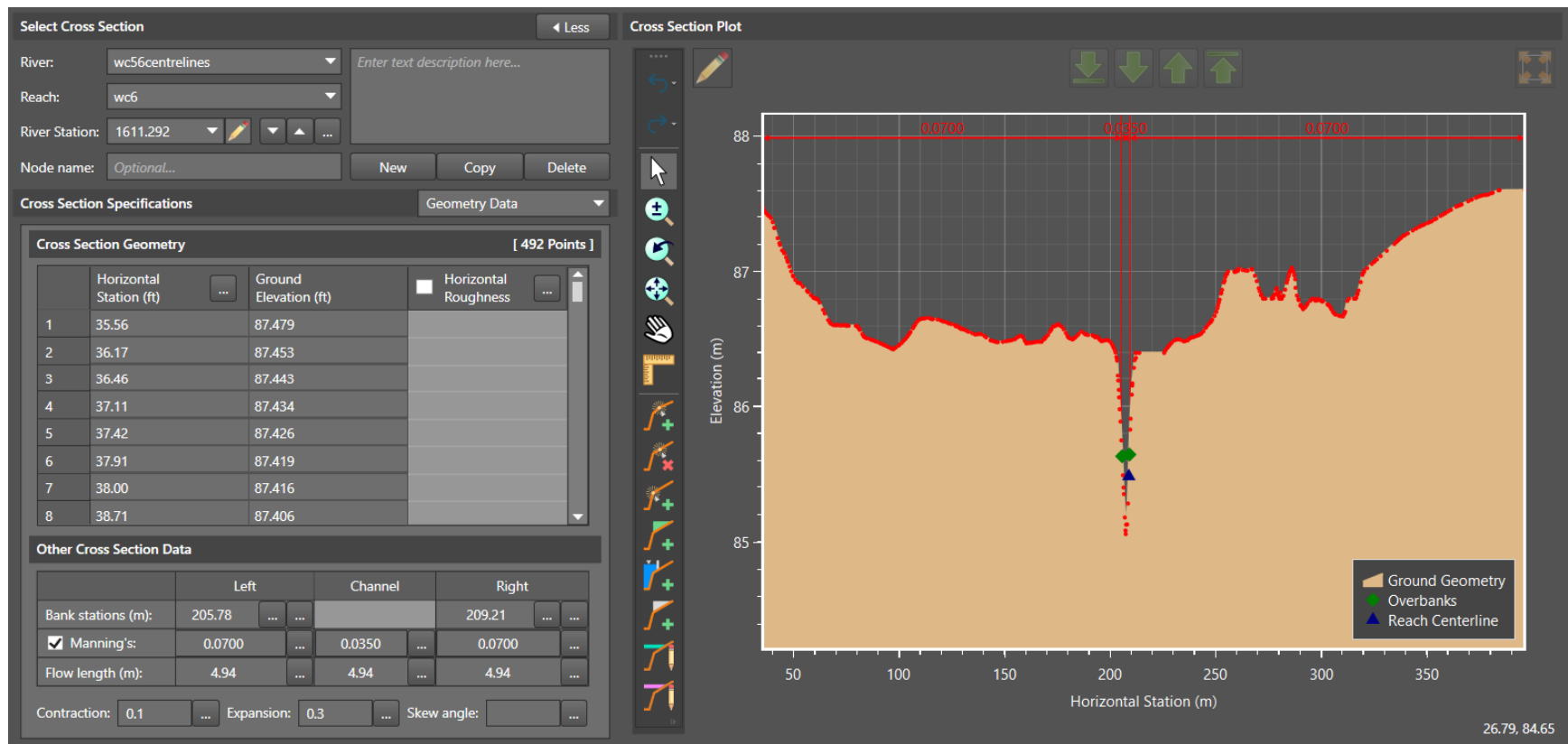
Cross Section Schematic – Within Block 1



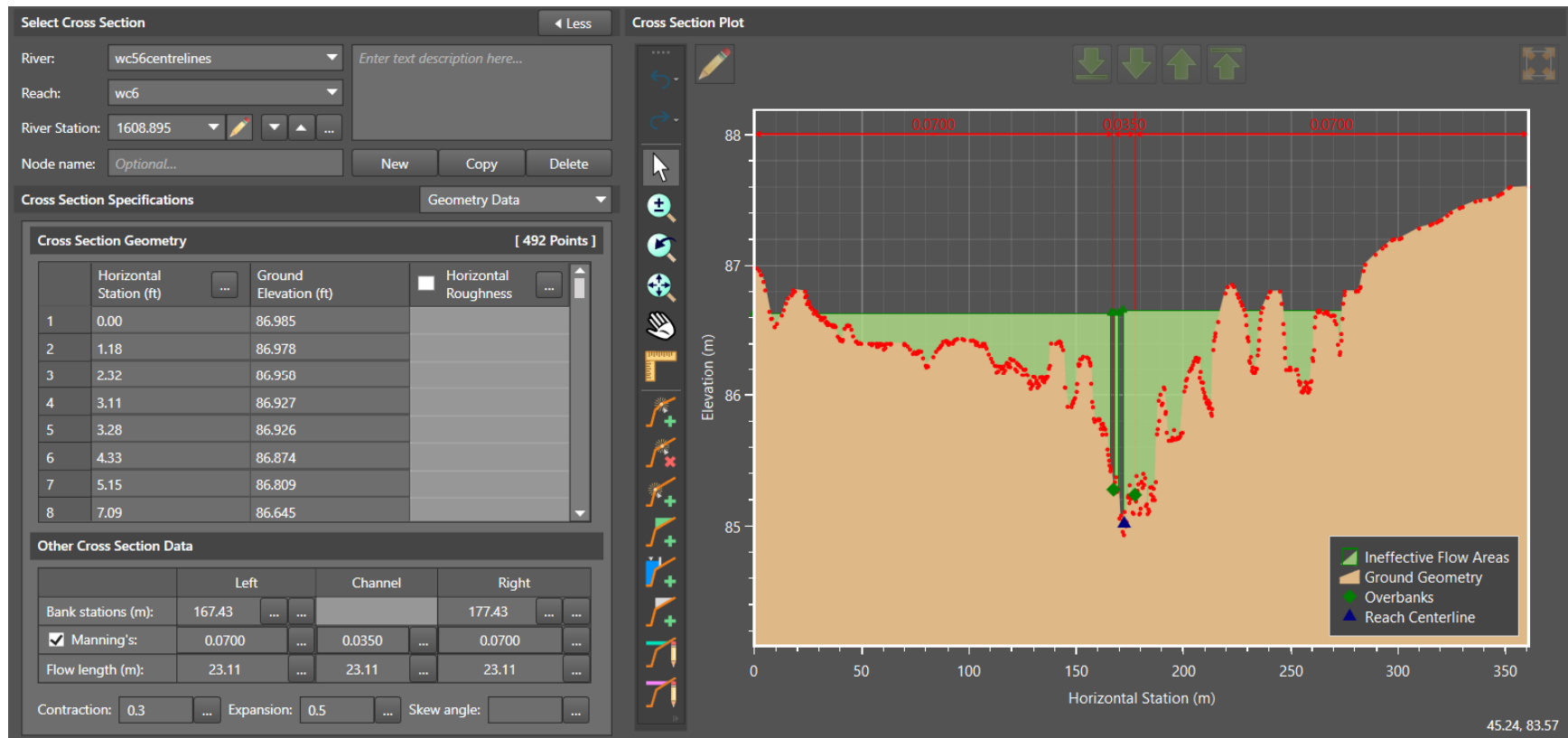
Cross Section Schematic – Within Block 1



Cross Section Schematic – Within Block 1



Cross Section Schematic – Within Block 1



HEC-RAS Plan: 2024-BSS1-RIP-EX River: wc56centreline Reach: wc5

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl	Volume (1000 m3)
wc5	2388.964	100-Year	8.16	92.94	93.96	93.76	94.00	0.002234	1.08	15.34	39.54	0.40	93.96
wc5	2388.964	5-Year	3.27	92.94	93.50	93.50	93.66	0.018328	1.77	1.85	5.81	1.00	9.22
wc5	2388.964	2-Year	1.81	92.94	93.36	93.36	93.49	0.019642	1.61	1.12	4.24	1.00	5.58
wc5	2290	100-Year	8.16	92.11	93.61		93.68	0.002335	1.20	6.82	7.77	0.41	91.75
wc5	2290	5-Year	3.27	92.11	93.18		93.21	0.001663	0.84	3.88	5.80	0.33	8.94
wc5	2290	2-Year	1.81	92.11	92.95		92.97	0.001367	0.67	2.68	4.87	0.29	5.39
wc5	2256	100-Year	8.16	91.90	93.51		93.61	0.001971	1.38	6.66	9.56	0.36	91.52
wc5	2256	5-Year	3.27	91.90	93.14		93.17	0.000836	0.74	4.47	4.50	0.22	8.79
wc5	2256	2-Year	1.81	91.90	92.93		92.95	0.000511	0.51	3.57	4.01	0.17	5.28
wc5	2221	100-Year	8.16	92.21	93.48		93.53	0.001789	1.30	14.13	38.17	0.38	91.16
wc5	2221	5-Year	3.27	92.21	93.03		93.11	0.003821	1.37	3.84	14.62	0.51	8.65
wc5	2221	2-Year	1.81	92.21	92.83		92.90	0.004441	1.19	1.85	6.05	0.53	5.19
wc5	2198	100-Year	8.16	92.01	93.18	93.18	93.43	0.008645	2.65	5.45	12.41	0.83	90.93
wc5	2198	5-Year	3.27	92.01	92.81	92.73	92.98	0.008703	1.98	2.29	5.74	0.78	8.58
wc5	2198	2-Year	1.81	92.01	92.60	92.57	92.74	0.011423	1.75	1.27	4.01	0.83	5.15
wc5	2150	100-Year	8.16	91.44	92.57	92.56	92.85	0.011355	2.40	3.87	9.13	0.88	90.70
wc5	2150	5-Year	3.27	91.44	92.20	92.18	92.39	0.016129	1.94	1.68	3.98	0.95	8.48
wc5	2150	2-Year	1.81	91.44	92.09		92.19	0.009854	1.41	1.28	3.38	0.73	5.09
wc5	2068.437	100-Year	8.16	90.80	91.50	91.49	91.75	0.015841	2.67	5.59	22.02	1.06	90.31
wc5	2068.437	5-Year	3.27	90.80	91.34	91.30	91.43	0.008307	1.60	3.14	11.94	0.73	8.28
wc5	2068.437	2-Year	1.81	90.80	91.19	91.19	91.29	0.012142	1.51	1.60	8.66	0.83	4.97
wc5	2044.707	100-Year	8.16	90.00	91.08	91.08	91.20	0.005868	1.93	8.64	32.35	0.65	89.91
wc5	2044.707	5-Year	3.27	90.00	90.74	90.67	90.91	0.010396	1.87	1.86	4.52	0.80	8.14
wc5	2044.707	2-Year	1.81	90.00	90.58		90.69	0.009571	1.45	1.26	3.43	0.73	4.89
wc5	1986.134	100-Year	8.16	89.81	90.77	90.77	90.94	0.008295	2.20	6.51	19.13	0.78	89.71
wc5	1986.134	5-Year	3.27	89.81	90.54	90.47	90.67	0.007338	1.67	2.73	14.68	0.69	8.08
wc5	1986.134	2-Year	1.81	89.81	90.41		90.49	0.005909	1.26	1.54	5.38	0.60	4.85
wc5	1901.030	100-Year	8.16	89.26	90.53	90.24	90.56	0.001619	1.17	14.29	31.94	0.36	88.84
wc5	1901.030	5-Year	3.27	89.26	90.04	89.96	90.14	0.005413	1.45	3.35	13.34	0.60	7.82
wc5	1901.030	2-Year	1.81	89.26	89.87	89.77	89.95	0.006875	1.30	1.59	6.88	0.64	4.72
wc5	1874.583	100-Year	8.16	89.05	89.98	89.96	90.42	0.016972	3.26	3.46	6.52	1.14	88.61
wc5	1874.583	5-Year	3.27	89.05	89.69	89.69	89.91	0.013378	2.19	1.85	4.81	0.94	7.76
wc5	1874.583	2-Year	1.81	89.05	89.53	89.53	89.69	0.014816	1.83	1.14	4.01	0.93	4.68
wc5	1801.453	100-Year	8.16	88.41	89.35	89.35	89.54	0.007587	2.16	5.97	18.64	0.76	88.26
wc5	1801.453	5-Year	3.27	88.41	89.10		89.19	0.005403	1.43	2.79	7.41	0.60	7.58
wc5	1801.453	2-Year	1.81	88.41	88.95		89.01	0.004835	1.12	1.81	5.78	0.54	4.58
wc5	1693.967	100-Year	8.16	88.01	88.92		88.99	0.004456	1.49	10.19	33.52	0.57	87.62
wc5	1693.967	5-Year	3.27	88.01	88.70	88.65	88.77	0.005125	1.25	4.08	25.09	0.57	7.31
wc5	1693.967	2-Year	1.81	88.01	88.61		88.66	0.004178	0.98	2.05	15.36	0.50	4.42
wc5	1602.883	100-Year	8.16	87.16	88.09	88.09	88.25	0.009300	2.29	8.13	37.77	0.82	86.54
wc5	1602.883	5-Year	3.27	87.16	87.91	87.91	88.03	0.007732	1.75	3.26	17.76	0.71	6.88
wc5	1602.883	2-Year	1.81	87.16	87.69	87.67	87.84	0.013414	1.73	1.24	4.91	0.87	4.23
wc5	1537.467	100-Year	8.16	86.82	87.87		87.90	0.001795	1.14	19.05	59.23	0.38	85.66
wc5	1537.467	5-Year	3.27	86.82	87.70		87.71	0.001281	0.84	10.06	43.65	0.31	6.45
wc5	1537.467	2-Year	1.81	86.82	87.58		87.59	0.001372	0.78	5.44	31.78	0.31	4.01
wc5	1471.795	100-Year	8.16	86.81	87.55	87.55	87.64	0.012022	2.36	9.19	40.49	0.91	84.73
wc5	1471.795	5-Year	3.27	86.81	87.38	87.38	87.50	0.015066	2.19	3.53	20.83	0.97	6.00
wc5	1471.795	2-Year	1.81	86.81	87.33	87.33	87.40	0.009301	1.60	2.52	17.74	0.75	3.75
wc5	1439.675	100-Year	8.16	86.80	87.42		87.43	0.001272	0.72	22.44	59.85	0.30	84.23
wc5	1439.675	5-Year	3.27	86.80	87.19		87.20	0.002122	0.67	9.89	45.11	0.35	5.79
wc5	1439.675	2-Year	1.81	86.80	87.10		87.11	0.002836	0.64	6.05	40.89	0.39	3.62
wc5	1320.692	100-Year	10.24	85.80	86.94	86.94	87.14	0.007117	2.51	8.56	23.58	0.77	82.73
wc5	1320.692	5-Year	4.06	85.80	86.52	86.52	86.74	0.011321	2.28	2.51	6.48	0.89	5.19
wc5	1320.692	2-Year	2.30	85.80	86.33	86.33	86.51	0.014076	2.02	1.43	4.58	0.94	3.25
wc5	1316.508	100-Year	10.24	85.26	86.65	86.38	86.83	0.005094	1.88	5.55	6.60	0.61	82.54
wc5	1316.508	5-Year	4.06	85.26	86.22	85.95	86.31	0.004548	1.32	3.07	4.92	0.53	5.11
wc5	1316.508	2-Year	2.30	85.26	86.00	85.77	86.07	0.004089	1.09	2.11	4.16	0.49	3.21
wc5	1291.617	100-Year	10.24	85.21	86.42		86.66	0.007900	2.17	4.78	6.14	0.75	82.41
wc5	1291.617	5-Year	4.06	85.21	86.02		86.15	0.008119	1.60	2.53	4.79	0.70	5.04
wc5	1291.617	2-Year	2.30	85.21	85.82		85.92	0.008297	1.39	1.66	3.98	0.69	3.16
wc5	1288.054	100-Year	10.24	85.00	86.24		86.47	0.007430	2.13	4.83	5.69	0.73	82.29
wc5	1288.054	5-Year	4.06	85.00	85.83		85.95	0.007307	1.55	2.63	4.82	0.67	4.98

HEC-RAS Plan: 2024-BSS1-RIP-EX River: wc5centreline Reach: wc5 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl	Volume (1000 m3)
wc5	1288.054	2-Year	2.30	85.00	85.63		85.72	0.007293	1.33	1.73	4.01	0.65	3.12
wc5	1225.493	100-Year	10.24	84.72	85.95		86.18	0.007607	2.14	4.86	6.42	0.74	82.10
wc5	1225.493	5-Year	4.06	84.72	85.54		85.67	0.007599	1.57	2.59	4.79	0.68	4.88
wc5	1225.493	2-Year	2.30	84.72	85.34		85.43	0.007602	1.35	1.71	3.99	0.66	3.05
wc5	1157.883	100-Year	10.24	84.21	85.44		85.67	0.007425	2.12	4.95	6.91	0.73	81.77
wc5	1157.883	5-Year	4.06	84.21	85.04		85.16	0.007397	1.55	2.61	4.81	0.67	4.70
wc5	1157.883	2-Year	2.30	84.21	84.84		84.93	0.007425	1.34	1.72	4.00	0.65	2.93
wc5	1131.031	100-Year	10.24	84.01	85.26		85.48	0.006990	2.08	5.13	7.69	0.71	81.64
wc5	1131.031	5-Year	4.06	84.01	84.84		84.96	0.007156	1.53	2.65	4.84	0.66	4.63
wc5	1131.031	2-Year	2.30	84.01	84.64		84.73	0.007098	1.32	1.75	4.03	0.64	2.89
wc5	1112.568	100-Year	10.24	83.88	85.11	84.96	85.34	0.007464	2.13	4.94	6.93	0.73	81.54
wc5	1112.568	5-Year	4.06	83.88	84.70	84.55	84.83	0.007575	1.57	2.59	4.79	0.68	4.58
wc5	1112.568	2-Year	2.30	83.88	84.50	84.38	84.60	0.007569	1.35	1.71	3.99	0.66	2.86
wc5	1071.480	100-Year	10.24	83.57	84.81	84.64	85.04	0.007360	2.12	4.89	6.17	0.72	81.34
wc5	1071.480	5-Year	4.06	83.57	84.40		84.52	0.007488	1.56	2.60	4.80	0.68	4.48
wc5	1071.480	2-Year	2.30	83.57	84.19		84.29	0.007519	1.34	1.71	3.99	0.66	2.79
wc5	1034.499	100-Year	10.24	83.29	84.56	84.36	84.77	0.006533	2.05	5.05	5.99	0.69	81.16
wc5	1034.499	5-Year	4.06	83.29	84.12	83.96	84.24	0.007154	1.53	2.65	4.84	0.66	4.38
wc5	1034.499	2-Year	2.30	83.29	83.92	83.79	84.01	0.007199	1.32	1.74	4.02	0.64	2.72
wc5	1013.774	100-Year	10.24	83.14	84.21	84.21	84.56	0.014820	2.62	3.92	6.05	0.99	81.06
wc5	1013.774	5-Year	4.06	83.14	83.89	83.81	84.05	0.011374	1.82	2.23	4.48	0.82	4.33
wc5	1013.774	2-Year	2.30	83.14	83.77	83.64	83.86	0.007233	1.32	1.74	4.02	0.64	2.68
wc5	951.8970	100-Year	12.42	82.62	84.17	83.80	84.18	0.000628	0.72	38.76	154.84	0.22	79.73
wc5	951.8970	5-Year	4.98	82.62	83.69	83.39	83.74	0.002624	1.07	7.05	32.05	0.41	4.04
wc5	951.8970	2-Year	2.91	82.62	83.43	83.20	83.50	0.004761	1.23	2.40	6.69	0.54	2.56
wc5	942.8887	100-Year	12.42	82.59	83.81	83.79	84.14	0.011286	2.59	5.34	20.97	0.89	79.60
wc5	942.8887	5-Year	4.98	82.59	83.62	83.34	83.71	0.004322	1.36	3.68	6.17	0.53	4.01
wc5	942.8887	2-Year	2.91	82.59	83.41	83.15	83.47	0.003991	1.13	2.57	4.77	0.49	2.54
wc5	931	100-Year	12.42	82.47	83.83	83.83	83.92	0.003442	1.58	16.60	88.57	0.51	79.30
wc5	931	5-Year	4.98	82.47	83.51	83.22	83.60	0.004182	1.34	3.73	7.09	0.52	3.91
wc5	931	2-Year	2.91	82.47	83.31	83.03	83.37	0.003589	1.09	2.67	4.86	0.47	2.47
wc5	918.3739	100-Year	12.42	82.41	83.57	83.57	83.57	0.000037	0.13	112.46	173.67	0.05	78.46
wc5	918.3739	5-Year	4.98	82.41	83.38	83.26	83.52	0.008537	1.64	3.05	5.80	0.72	3.86
wc5	918.3739	2-Year	2.91	82.41	83.16	83.10	83.28	0.012116	1.57	1.85	4.88	0.82	2.44
wc5	815.3577	100-Year	12.42	81.85	83.06	83.06	83.40	0.015135	2.56	4.85	7.25	1.00	73.18
wc5	815.3577	5-Year	4.98	81.85	82.96	82.60	83.03	0.003504	1.20	4.14	6.39	0.48	3.54
wc5	815.3577	2-Year	2.91	81.85	82.73	82.41	82.78	0.003007	1.02	2.85	5.00	0.43	2.23
wc5	680.8133	100-Year	14.83	81.64	83.25	82.91	83.25	0.000002	0.04	395.78	276.93	0.01	66.37
wc5	680.8133	5-Year	5.96	81.64	82.84	82.46	82.92	0.002948	1.30	4.62	5.93	0.45	3.39
wc5	680.8133	2-Year	3.47	81.64	82.63	82.26	82.69	0.002506	1.00	3.47	5.48	0.40	2.12
wc5	678.6898	100-Year	14.83	81.55	83.25	82.82	83.25	0.000001	0.03	464.38	276.46	0.01	60.57
wc5	678.6898	5-Year	5.96	81.55	82.81	82.37	82.88	0.002304	1.21	4.98	5.94	0.41	3.33
wc5	678.6898	2-Year	3.47	81.55	82.61	82.17	82.65	0.001787	0.90	3.85	5.61	0.34	2.07
wc5	665	100-Year	14.83	81.40	83.25	82.74	83.25	0.000085	0.28	98.34	178.37	0.08	37.21
wc5	665	5-Year	5.96	81.40	82.60	82.34	82.65	0.003169	1.02	7.13	40.79	0.45	2.82
wc5	665	2-Year	3.47	81.40	82.33	82.18	82.40	0.006458	1.17	2.96	7.77	0.61	1.79
wc5	660	100-Year	14.83	81.32	82.82	82.82	83.21	0.015358	2.79	5.32	6.75	1.00	37.06
wc5	660	5-Year	5.96	81.32	82.34	82.34	82.61	0.017084	2.30	2.59	4.79	1.00	2.81
wc5	660	2-Year	3.47	81.32	82.14	82.14	82.35	0.018522	2.06	1.68	3.93	1.01	1.78
wc5	651.8919	100-Year	14.83	80.93	82.23	82.23	82.23	0.000002	0.04	482.17	350.02	0.01	30.79
wc5	651.8919	5-Year	5.96	80.93	81.98	81.75	82.10	0.005734	1.59	3.85	9.19	0.61	2.73
wc5	651.8919	2-Year	3.47	80.93	81.73	81.55	81.83	0.006161	1.39	2.49	4.71	0.61	1.73
wc5	648.3854	100-Year	14.83	80.78	81.93	81.93	81.93	0.000006	0.05	349.42	355.19	0.02	20.82
wc5	648.3854	5-Year	5.96	80.78	81.61	81.61	81.87	0.016158	2.29	2.80	4.80	0.99	2.65
wc5	648.3854	2-Year	3.47	80.78	81.45	81.40	81.62	0.012434	1.80	1.92	4.20	0.85	1.68
wc5	553.6066	100-Year	14.83	80.14	81.80	81.31	81.81	0.000675	0.68	42.56	151.61	0.23	6.70
wc5	553.6066	5-Year	5.96	80.14	81.24	80.96	81.30	0.003494	1.08	5.52	10.52	0.48	2.36
wc5	553.6066	2-Year	3.47	80.14	80.97	80.79	81.04	0.005222	1.11	3.11	7.64	0.56	1.50
wc5	521.5115	100-Year	14.83	80.04	81.65	81.43	81.78	0.003163	1.76	14.34	42.14	0.50	6.28
wc5	521.5115	5-Year	5.96	80.04	81.11	80.86	81.23	0.005200	1.54	3.89	6.44	0.59	2.29
wc5	521.5115	2-Year	3.47	80.04	80.86	80.66	80.95	0.005716	1.35	2.56	4.77	0.59	1.45

HEC-RAS Plan: 2024-BSS1-RIP-EX River: wc5centreline Reach: wc5 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl	Volume (1000 m3)
wc5	518.7136	100-Year	15.40	79.98	81.33	81.33	81.71	0.010670	2.77	6.16	11.24	0.89	6.18
wc5	518.7136	5-Year	6.64	79.98	80.85	80.85	81.13	0.015997	2.35	2.83	4.99	1.00	2.26
wc5	518.7136	2-Year	3.86	79.98	80.70	80.64	80.87	0.011590	1.81	2.13	4.40	0.83	1.43
wc5	487.5449	100-Year	15.40	79.68	80.81	80.78	81.07	0.009674	2.37	7.52	13.71	0.84	5.87
wc5	487.5449	5-Year	6.64	79.68	80.64	80.42	80.73	0.004152	1.35	5.46	11.65	0.53	2.07
wc5	487.5449	2-Year	3.86	79.68	80.43	80.25	80.50	0.005135	1.21	3.21	8.71	0.56	1.31
wc5	484.1846	100-Year	15.40	79.63	80.92	80.77	80.98	0.002222	1.27	21.45	60.51	0.42	5.77
wc5	484.1846	5-Year	6.64	79.63	80.62	80.37	80.70	0.003636	1.27	6.77	36.10	0.50	2.02
wc5	484.1846	2-Year	3.86	79.63	80.40	80.20	80.47	0.004908	1.18	3.28	7.16	0.55	1.29
wc5	381.2556	100-Year	15.40	79.11	80.73	80.40	80.80	0.002218	1.48	22.98	74.84	0.42	4.04
wc5	381.2556	5-Year	6.64	79.11	80.31	79.98	80.41	0.003656	1.45	4.59	5.57	0.51	1.58
wc5	381.2556	2-Year	3.86	79.11	80.04	79.77	80.12	0.004132	1.24	3.12	5.22	0.51	1.04
wc5	359.8282	100-Year	15.40	78.85	80.52	80.52	80.67	0.004641	1.95	15.42	61.61	0.58	3.26
wc5	359.8282	5-Year	6.64	78.85	80.02	79.82	80.20	0.007672	1.88	3.52	4.68	0.69	1.42
wc5	359.8282	2-Year	3.86	78.85	79.79	79.58	79.91	0.006466	1.54	2.51	4.03	0.62	0.92
wc5	304.0528	100-Year	15.40	78.22	79.67	79.67	79.98	0.010553	2.63	7.18	12.55	0.88	2.50
wc5	304.0528	5-Year	6.64	78.22	79.32	79.32	79.54	0.012774	2.12	3.39	9.16	0.89	1.18
wc5	304.0528	2-Year	3.86	78.22	79.12	79.08	79.30	0.013288	1.86	2.08	4.57	0.88	0.77
wc5	250	100-Year	15.40	77.55	78.75	78.75	79.13	0.014590	2.70	5.70	7.79	1.01	2.12
wc5	250	5-Year	6.64	77.55	78.37	78.37	78.61	0.016056	2.20	3.02	6.10	1.00	0.99
wc5	250	2-Year	3.86	77.55	78.19	78.19	78.38	0.017847	1.94	1.99	5.33	1.01	0.65
wc5	230	100-Year	15.40	76.75	78.69		78.75	0.001242	1.03	15.29	18.79	0.32	1.92
wc5	230	5-Year	6.64	76.75	78.04		78.09	0.001906	0.95	7.01	10.26	0.37	0.90
wc5	230	2-Year	3.86	76.75	77.78		77.82	0.002250	0.86	4.51	8.74	0.38	0.59
wc5	200	100-Year	15.40	76.48	78.55		78.62	0.000974	1.22	15.04	13.67	0.30	0.17
wc5	200	5-Year	6.64	76.48	77.86		77.91	0.001295	0.99	7.17	9.24	0.32	0.08
wc5	200	2-Year	3.86	76.48	77.58		77.61	0.001454	0.83	4.76	7.85	0.32	0.05
wc5	170	100-Year	15.40	76.48	78.57	77.53	78.60	0.000411	0.81	22.79	18.27	0.20	0.08
wc5	170	5-Year	6.64	76.48	77.88	77.23	77.90	0.000588	0.68	10.43	13.27	0.22	0.04
wc5	170	2-Year	3.86	76.48	77.59	77.08	77.60	0.000669	0.57	6.88	11.17	0.22	0.02

HEC-RAS Plan: 2024-BSS1-RIP-PR River: wc56centreline Reach: wc5

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	2388.964	100-Year	8.16	92.94	93.94	93.76	93.98	0.002530	1.13	14.57	39.00	0.43
wc5	2388.964	5-Year	3.27	92.94	93.62	93.50	93.69	0.006215	1.20	3.63	27.74	0.61
wc5	2388.964	2-Year	1.81	92.94	93.48	93.36	93.53	0.006840	1.06	1.71	5.54	0.61
wc5	2290	100-Year	8.16	92.11	93.33		93.47	0.005942	1.70	4.79	6.47	0.63
wc5	2290	5-Year	3.27	92.11	92.83		92.95	0.008402	1.54	2.13	4.39	0.71
wc5	2290	2-Year	1.81	92.11	92.62		92.72	0.010061	1.40	1.29	3.55	0.74
wc5	2256	100-Year	8.16	91.90	92.98		93.22	0.008864	2.18	3.76	4.12	0.71
wc5	2256	5-Year	3.27	91.90	92.63		92.72	0.005367	1.36	2.40	3.66	0.54
wc5	2256	2-Year	1.81	91.90	92.45		92.51	0.003876	1.01	1.79	3.50	0.45
wc5	2221	100-Year	8.16	91.58	92.71		92.93	0.007483	2.06	4.07	5.36	0.65
wc5	2221	5-Year	3.27	91.58	92.54		92.59	0.002171	0.99	3.29	3.85	0.34
wc5	2221	2-Year	1.81	91.58	92.41		92.43	0.001054	0.65	2.80	3.74	0.24
wc5	2198	100-Year	8.16	91.82	92.58	92.58	92.74	0.011058	2.17	7.88	24.51	0.87
wc5	2198	5-Year	3.27	91.82	92.41	92.41	92.51	0.009047	1.58	3.74	22.33	0.75
wc5	2198	2-Year	1.81	91.82	92.27	92.25	92.38	0.012451	1.46	1.45	10.28	0.82
wc5	2150	100-Year	8.16	91.45	92.20	92.18	92.33	0.009072	1.99	8.77	26.70	0.79
wc5	2150	5-Year	3.27	91.45	92.00	92.00	92.10	0.008847	1.54	3.87	22.82	0.74
wc5	2150	2-Year	1.81	91.45	91.91	91.85	91.98	0.008062	1.25	1.99	15.11	0.68
wc5	2068.437	100-Year	8.16	90.60	91.31	91.31	91.47	0.010743	2.18	8.08	24.84	0.87
wc5	2068.437	5-Year	3.27	90.60	91.11	91.11	91.23	0.011351	1.72	3.35	18.27	0.84
wc5	2068.437	2-Year	1.81	90.60	90.99	90.98	91.09	0.013285	1.49	1.64	10.17	0.86
wc5	2044.707	100-Year	8.16	90.00	90.76		90.88	0.007624	1.79	8.35	24.81	0.73
wc5	2044.707	5-Year	3.27	90.00	90.56	90.50	90.64	0.007158	1.33	3.63	20.53	0.66
wc5	2044.707	2-Year	1.81	90.00	90.44		90.50	0.008187	1.13	1.76	10.32	0.67
wc5	1986.134	100-Year	8.16	89.80	90.49	90.49	90.65	0.010684	2.13	7.91	24.46	0.86
wc5	1986.134	5-Year	3.27	89.80	90.28	90.28	90.41	0.011771	1.70	3.21	17.33	0.85
wc5	1986.134	2-Year	1.81	89.80	90.19	90.16	90.27	0.009788	1.31	1.90	11.84	0.74
wc5	1901.030	100-Year	8.16	88.80	89.49	89.49	89.64	0.010397	2.13	7.85	24.30	0.85
wc5	1901.030	5-Year	3.27	88.80	89.28	89.28	89.40	0.010747	1.66	3.23	18.58	0.81
wc5	1901.030	2-Year	1.81	88.80	89.14	89.14	89.26	0.015868	1.54	1.34	8.29	0.92
wc5	1874.583	100-Year	8.16	88.20	88.99		89.08	0.006042	1.77	10.28	25.63	0.66
wc5	1874.583	5-Year	3.27	88.20	88.75		88.82	0.006309	1.39	4.74	21.04	0.64
wc5	1874.583	2-Year	1.81	88.20	88.63	88.58	88.70	0.006968	1.22	2.50	16.57	0.64
wc5	1801.453	100-Year	8.16	87.80	88.63		88.72	0.004771	1.63	10.78	25.41	0.60
wc5	1801.453	5-Year	3.27	87.80	88.40		88.46	0.004561	1.25	5.12	22.98	0.55
wc5	1801.453	2-Year	1.81	87.80	88.28		88.33	0.004234	1.02	2.81	15.60	0.51
wc5	1693.967	100-Year	8.16	87.47	88.31		88.38	0.005131	1.59	10.81	25.50	0.61
wc5	1693.967	5-Year	3.27	87.47	88.08		88.14	0.005142	1.22	5.28	23.42	0.57
wc5	1693.967	2-Year	1.81	87.47	87.99		88.03	0.004695	1.01	3.11	21.72	0.52
wc5	1602.883	100-Year	8.16	87.00	87.76		87.82	0.004465	1.52	11.53	25.75	0.57
wc5	1602.883	5-Year	3.27	87.00	87.52		87.57	0.004658	1.18	5.64	23.14	0.55
wc5	1602.883	2-Year	1.81	87.00	87.40		87.45	0.005366	1.05	3.10	21.00	0.56
wc5	1537.467	100-Year	8.16	86.60	87.35		87.46	0.007114	1.85	9.59	25.11	0.72
wc5	1537.467	5-Year	3.27	86.60	87.15		87.22	0.006210	1.37	4.74	21.44	0.63
wc5	1537.467	2-Year	1.81	86.60	87.05		87.10	0.005496	1.09	2.81	16.08	0.57
wc5	1471.795	100-Year	8.16	86.20	87.06		87.12	0.003523	1.33	11.83	28.48	0.51
wc5	1471.795	5-Year	3.27	86.20	86.79		86.85	0.004941	1.14	4.62	24.92	0.55
wc5	1471.795	2-Year	1.81	86.20	86.67		86.72	0.005803	0.99	2.17	14.17	0.57
wc5	1439.675	100-Year	8.16	86.00	86.98		87.02	0.002164	1.20	14.87	29.75	0.41
wc5	1439.675	5-Year	3.27	86.00	86.61		86.68	0.005126	1.28	4.57	25.09	0.57
wc5	1439.675	2-Year	1.81	86.00	86.54		86.58	0.003044	0.90	2.98	19.35	0.43
wc5	1320.692	100-Year	10.24	85.60	86.87		86.90	0.001091	1.02	21.45	28.69	0.30
wc5	1320.692	5-Year	4.06	85.60	86.36		86.40	0.002456	1.03	7.83	24.56	0.41
wc5	1320.692	2-Year	2.30	85.60	86.13	86.05	86.20	0.006501	1.25	2.62	16.82	0.62
wc5	1316.508	100-Year	10.24	85.26	86.65	86.38	86.83	0.005094	1.88	5.55	6.60	0.61
wc5	1316.508	5-Year	4.06	85.26	86.22	85.95	86.31	0.004548	1.32	3.07	4.92	0.53
wc5	1316.508	2-Year	2.30	85.26	86.00	85.77	86.07	0.004089	1.09	2.11	4.16	0.49
wc5	1291.617	100-Year	10.24	85.21	86.42		86.66	0.007900	2.17	4.78	6.14	0.75

HEC-RAS Plan: 2024-BSS1-RIP-PR River: wc56centreline Reach: wc5 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	1291.617	5-Year	4.06	85.21	86.02		86.15	0.008119	1.60	2.53	4.79	0.70
wc5	1291.617	2-Year	2.30	85.21	85.82		85.92	0.008297	1.39	1.66	3.98	0.69
wc5	1288.054	100-Year	10.24	85.00	86.24		86.47	0.007430	2.13	4.83	5.69	0.73
wc5	1288.054	5-Year	4.06	85.00	85.83		85.95	0.007307	1.55	2.63	4.82	0.67
wc5	1288.054	2-Year	2.30	85.00	85.63		85.72	0.007293	1.33	1.73	4.01	0.65
wc5	1225.493	100-Year	10.24	84.72	85.95		86.18	0.007607	2.14	4.86	6.42	0.74
wc5	1225.493	5-Year	4.06	84.72	85.54		85.67	0.007599	1.57	2.59	4.79	0.68
wc5	1225.493	2-Year	2.30	84.72	85.34		85.43	0.007602	1.35	1.71	3.99	0.66
wc5	1157.883	100-Year	10.24	84.21	85.44		85.67	0.007425	2.12	4.95	6.91	0.73
wc5	1157.883	5-Year	4.06	84.21	85.04		85.16	0.007397	1.55	2.61	4.81	0.67
wc5	1157.883	2-Year	2.30	84.21	84.84		84.93	0.007425	1.34	1.72	4.00	0.65
wc5	1131.031	100-Year	10.24	84.01	85.26		85.48	0.006990	2.08	5.13	7.69	0.71
wc5	1131.031	5-Year	4.06	84.01	84.84		84.96	0.007156	1.53	2.65	4.84	0.66
wc5	1131.031	2-Year	2.30	84.01	84.64		84.73	0.007098	1.32	1.75	4.03	0.64
wc5	1112.568	100-Year	10.24	83.88	85.11	84.96	85.34	0.007464	2.13	4.94	6.93	0.73
wc5	1112.568	5-Year	4.06	83.88	84.70	84.55	84.83	0.007575	1.57	2.59	4.79	0.68
wc5	1112.568	2-Year	2.30	83.88	84.50	84.38	84.60	0.007569	1.35	1.71	3.99	0.66
wc5	1071.480	100-Year	10.24	83.57	84.81	84.64	85.04	0.007360	2.12	4.89	6.17	0.72
wc5	1071.480	5-Year	4.06	83.57	84.40		84.52	0.007488	1.56	2.60	4.80	0.68
wc5	1071.480	2-Year	2.30	83.57	84.19		84.29	0.007519	1.34	1.71	3.99	0.66
wc5	1034.499	100-Year	10.24	83.29	84.56	84.36	84.77	0.006533	2.05	5.05	5.99	0.69
wc5	1034.499	5-Year	4.06	83.29	84.12	83.96	84.24	0.007154	1.53	2.65	4.84	0.66
wc5	1034.499	2-Year	2.30	83.29	83.92	83.79	84.01	0.007199	1.32	1.74	4.02	0.64
wc5	1013.774	100-Year	10.24	83.14	84.21	84.21	84.56	0.014820	2.62	3.92	6.05	0.99
wc5	1013.774	5-Year	4.06	83.14	83.89	83.81	84.05	0.011374	1.82	2.23	4.48	0.82
wc5	1013.774	2-Year	2.30	83.14	83.77	83.64	83.86	0.007233	1.32	1.74	4.02	0.64
wc5	951.8970	100-Year	12.42	82.62	84.17	83.80	84.18	0.000628	0.72	38.76	154.84	0.22
wc5	951.8970	5-Year	4.98	82.62	83.69	83.39	83.74	0.002624	1.07	7.05	32.05	0.41
wc5	951.8970	2-Year	2.91	82.62	83.43	83.20	83.50	0.004761	1.23	2.40	6.69	0.54
wc5	942.8887	100-Year	12.42	82.59	83.81	83.79	84.14	0.011286	2.59	5.34	20.97	0.89
wc5	942.8887	5-Year	4.98	82.59	83.62	83.34	83.71	0.004322	1.36	3.68	6.17	0.53
wc5	942.8887	2-Year	2.91	82.59	83.41	83.15	83.47	0.003991	1.13	2.57	4.77	0.49
wc5	931	100-Year	12.42	82.47	83.83	83.83	83.92	0.003442	1.58	16.60	88.57	0.51
wc5	931	5-Year	4.98	82.47	83.51	83.22	83.60	0.004182	1.34	3.73	7.09	0.52
wc5	931	2-Year	2.91	82.47	83.31	83.03	83.37	0.003589	1.09	2.67	4.86	0.47
wc5	918.3739	100-Year	12.42	82.41	83.57	83.57	83.57	0.000037	0.13	112.46	173.67	0.05
wc5	918.3739	5-Year	4.98	82.41	83.38	83.26	83.52	0.008537	1.64	3.05	5.80	0.72
wc5	918.3739	2-Year	2.91	82.41	83.16	83.10	83.28	0.012116	1.57	1.85	4.88	0.82
wc5	815.3577	100-Year	12.42	81.85	83.06	83.06	83.40	0.015135	2.56	4.85	7.25	1.00
wc5	815.3577	5-Year	4.98	81.85	82.96	82.60	83.03	0.003504	1.20	4.14	6.39	0.48
wc5	815.3577	2-Year	2.91	81.85	82.73	82.41	82.78	0.003007	1.02	2.85	5.00	0.43
wc5	680.8133	100-Year	14.83	81.64	83.25	82.91	83.25	0.000002	0.04	395.78	276.93	0.01
wc5	680.8133	5-Year	5.96	81.64	82.84	82.46	82.92	0.002948	1.30	4.62	5.93	0.45
wc5	680.8133	2-Year	3.47	81.64	82.63	82.26	82.69	0.002506	1.00	3.47	5.48	0.40
wc5	678.6898	100-Year	14.83	81.55	83.25	82.82	83.25	0.000001	0.03	464.38	276.46	0.01
wc5	678.6898	5-Year	5.96	81.55	82.81	82.37	82.88	0.002304	1.21	4.98	5.94	0.41
wc5	678.6898	2-Year	3.47	81.55	82.61	82.17	82.65	0.001787	0.90	3.85	5.61	0.34
wc5	665	100-Year	14.83	81.40	83.25	82.74	83.25	0.000085	0.28	98.34	178.37	0.08
wc5	665	5-Year	5.96	81.40	82.60	82.34	82.65	0.003169	1.02	7.13	40.79	0.45
wc5	665	2-Year	3.47	81.40	82.33	82.18	82.40	0.006458	1.17	2.96	7.77	0.61
wc5	660	100-Year	14.83	81.32	82.82	82.82	83.21	0.015358	2.79	5.32	6.75	1.00
wc5	660	5-Year	5.96	81.32	82.34	82.34	82.61	0.017084	2.30	2.59	4.79	1.00
wc5	660	2-Year	3.47	81.32	82.14	82.14	82.35	0.018522	2.06	1.68	3.93	1.01
wc5	651.8919	100-Year	14.83	80.93	82.23	82.23	82.23	0.000002	0.04	482.17	350.02	0.01
wc5	651.8919	5-Year	5.96	80.93	81.98	81.75	82.10	0.005734	1.59	3.85	9.19	0.61
wc5	651.8919	2-Year	3.47	80.93	81.73	81.55	81.83	0.006161	1.39	2.49	4.71	0.61
wc5	648.3854	100-Year	14.83	80.78	81.93	81.93	81.93	0.000006	0.05	349.42	355.19	0.02
wc5	648.3854	5-Year	5.96	80.78	81.61	81.61	81.87	0.016158	2.29	2.60	4.80	0.99

HEC-RAS Plan: 2024-BSS1-RIP-PR River: wc5centrelines Reach: wc5 (Continued)

Reach	River Sta	Profile	Q Total (m3/s)	Min Ch El (m)	W.S. Elev (m)	Crit W.S. (m)	E.G. Elev (m)	E.G. Slope (m/m)	Vel Chnl (m/s)	Flow Area (m2)	Top Width (m)	Froude # Chl
wc5	648.3854	2-Year	3.47	80.78	81.45	81.40	81.62	0.012434	1.80	1.92	4.20	0.85
wc5	553.6066	100-Year	14.83	80.14	81.80	81.31	81.81	0.000675	0.68	42.56	151.61	0.23
wc5	553.6066	5-Year	5.96	80.14	81.24	80.96	81.30	0.003494	1.08	5.52	10.52	0.48
wc5	553.6066	2-Year	3.47	80.14	80.97	80.79	81.04	0.005222	1.11	3.11	7.64	0.56
wc5	521.5115	100-Year	14.83	80.04	81.65	81.43	81.78	0.003163	1.76	14.34	42.14	0.50
wc5	521.5115	5-Year	5.96	80.04	81.11	80.86	81.23	0.005200	1.54	3.89	6.44	0.59
wc5	521.5115	2-Year	3.47	80.04	80.86	80.66	80.95	0.005716	1.35	2.56	4.77	0.59
wc5	518.7136	100-Year	15.40	79.98	81.33	81.33	81.71	0.010670	2.77	6.16	11.24	0.89
wc5	518.7136	5-Year	6.64	79.98	80.85	80.85	81.13	0.015997	2.35	2.83	4.99	1.00
wc5	518.7136	2-Year	3.86	79.98	80.70	80.64	80.87	0.011590	1.81	2.13	4.40	0.83
wc5	487.5449	100-Year	15.40	79.68	80.81	80.78	81.07	0.009674	2.37	7.52	13.71	0.84
wc5	487.5449	5-Year	6.64	79.68	80.64	80.42	80.73	0.004152	1.35	5.46	11.65	0.53
wc5	487.5449	2-Year	3.86	79.68	80.43	80.25	80.50	0.005135	1.21	3.21	8.71	0.56
wc5	484.1846	100-Year	15.40	79.63	80.92	80.77	80.98	0.002222	1.27	21.45	60.51	0.42
wc5	484.1846	5-Year	6.64	79.63	80.62	80.37	80.70	0.003636	1.27	6.77	36.10	0.50
wc5	484.1846	2-Year	3.86	79.63	80.40	80.20	80.47	0.004908	1.18	3.28	7.16	0.55
wc5	381.2556	100-Year	15.40	79.11	80.73	80.40	80.80	0.002218	1.48	22.98	74.84	0.42
wc5	381.2556	5-Year	6.64	79.11	80.31	79.98	80.41	0.003656	1.45	4.59	5.57	0.51
wc5	381.2556	2-Year	3.86	79.11	80.04	79.77	80.12	0.004132	1.24	3.12	5.22	0.51
wc5	359.8282	100-Year	15.40	78.85	80.52	80.52	80.67	0.004641	1.95	15.42	61.61	0.58
wc5	359.8282	5-Year	6.64	78.85	80.02	79.82	80.20	0.007672	1.88	3.52	4.68	0.69
wc5	359.8282	2-Year	3.86	78.85	79.79	79.58	79.91	0.006466	1.54	2.51	4.03	0.62
wc5	304.0528	100-Year	15.40	78.22	79.67	79.67	79.98	0.010553	2.63	7.18	12.55	0.88
wc5	304.0528	5-Year	6.64	78.22	79.32	79.32	79.54	0.012774	2.12	3.39	9.16	0.89
wc5	304.0528	2-Year	3.86	78.22	79.12	79.08	79.30	0.013288	1.86	2.08	4.57	0.88
wc5	250	100-Year	15.40	77.55	78.75	78.75	79.13	0.014590	2.70	5.70	7.79	1.01
wc5	250	5-Year	6.64	77.55	78.37	78.37	78.61	0.016056	2.20	3.02	6.10	1.00
wc5	250	2-Year	3.86	77.55	78.19	78.19	78.38	0.017847	1.94	1.99	5.33	1.01
wc5	230	100-Year	15.40	76.75	78.69		78.75	0.001242	1.03	15.29	18.79	0.32
wc5	230	5-Year	6.64	76.75	78.04		78.09	0.001906	0.95	7.01	10.26	0.37
wc5	230	2-Year	3.86	76.75	77.78		77.82	0.002250	0.86	4.51	8.74	0.38
wc5	200	100-Year	15.40	76.48	78.55		78.62	0.000974	1.22	15.04	13.67	0.30
wc5	200	5-Year	6.64	76.48	77.86		77.91	0.001295	0.99	7.17	9.24	0.32
wc5	200	2-Year	3.86	76.48	77.58		77.61	0.001454	0.83	4.76	7.85	0.32
wc5	170	100-Year	15.40	76.48	78.57	77.53	78.60	0.000411	0.81	22.79	18.27	0.20
wc5	170	5-Year	6.64	76.48	77.88	77.23	77.90	0.000588	0.68	10.43	13.27	0.22
wc5	170	2-Year	3.86	76.48	77.59	77.08	77.60	0.000669	0.57	6.88	11.17	0.22