

Fontana
Wichita, Sedgwick County, Kansas
03/13/04

Fontana is a 137.5 acre, single family, residential development north of Wichita in Sedgwick County, Kansas. The 233 lot development consists of streets, storm sewer and detention ponds. This report contains a drawing of the drainage plan, supporting calculations and data for the Fontana Drainage Plan.

Hydrology

The proposed plat lies in the SW 1/4, Section 31, T26S, R1W. The soil on-site is comprised of Blanket silt loam, Tabler silty clay loam, Vanoss silty loam and Waurika silt loam, which are classified in hydrologic groups C, D, B and D, respectively. The land is currently used for agricultural purposes and has short grass and bare ground throughout. The site is bordered to the north and east by agricultural land, to the south by 29th Street North, and to the west by 119th Street West. A natural drainage channel cuts through this site from the north property line to the east property line and has approximately 230 acres of contributing area to the north and west of this site. Existing Basins A and E drain off the site to the south and east, respectively, while Existing Basins B, C, and D drain into the natural drainage channel. Proposed Basins 1 and 9 drain to the same outfalls as Existing Basins A and E, while all other proposed basins flow through the series of ponds and eventually to the natural drainage channel.

The Rational Method was used to calculate runoff quantities. Runoff coefficients were estimated based on tables presented in the Design Aids section of this report using fully developed conditions. Time of concentration was based on slope, flow velocity and length of flow through each basin and was not allowed to be less than 15 minutes. The HEC-1 computer program was used to route the runoff through the ponds and determine the post-development conditions leaving the site.

The analysis was made based on the available site data which includes the following: 1" = 100' topographic map with 1' contours of the site, a Sedgwick County Soil Survey Map and noted references.

Storm Sewer Design

For the storm sewer hydrologic analysis, the Rational Method was again used. Runoff coefficients were estimated using the charts in the design aids section of this report. For this development, a uniform assumption of the minimum time of concentration of 15 minutes was deemed appropriate. Travel time for flow through defined channels, pipes, etc, for these basins was estimated on the basis of Manning's Equation.

In the hydraulic analysis, the storm sewers are designed for the minor storm, with major storm overflows to be routed through easements and rights-of-way to an appropriate outlet. The minor storm has a recurrence interval of two years. The major storm evaluated has a recurrence interval of one hundred years. To simplify this analysis, the time of concentration is identical for both the major and minor storms.

For each inlet, street flooding and inlet capacity were checked for the minor storm. Conveyance in the street is based on the Modified Manning's Equation, as expressed in the Design of Urban Highway Drainage – The State of the Art, Equation (5-1), pages 5-9. It has been assumed that Tc for street flow is equal to Tc for pipe flow. This is a simplifying, but conservative, assumption since pipe flow velocities generally exceed street flow velocities. For local streets, curb-deep flow is tolerable for the minor storm. For collector streets, a single eight-foot lane should remain unflooded for the minor storm.

Inlet capacities were determined by the methods described in Drainage of Highway Pavements, Hydraulic Engineering Circular #12, using Chart #12 as found in the Design Aids section. City of Wichita Type 1A inlets and 3/8 inch per foot cross slopes have been assumed. Minimum walk grade has been assumed to be 0.3 feet above the top of

curb, unless otherwise noted. Streets have been assumed to have 6-5/8 inch standard curb, unless otherwise noted.

Hydraulic computation for the storm sewer pipe system was performed using PEC's STORM computer program. This program uses Manning's Equation to calculate friction losses for pipes flowing full. Minor losses are computed by momentum principles at each structure. All pipe area is assumed to be reinforced concrete with a Manning's "n" of 0.013. It is desirable to keep the hydraulic grade line at least one foot below the top of curb for the minor storm. The calculations and the STORM analyses for the storm sewers are included in this report.

Design Aids

This section includes material used to assist in designing the drainage system. A 1" = 100' scale Drainage Plan map (Attachment A) and a 1" = 100' scale Four-Corner Plan map (Attachment B) are enclosed in the pockets.

References

Design of Urban Highway Drainage – The State of the Art, by Reitz & Jens, Inc., April 1980.

Drainage of Highway Pavements, Hydraulic Engineering Circular #12, by Tye Engineering, Inc., March 1984.

Interim Drainage and Storm Sewer Policy for Design Criteria and Documentation, City of Wichita, Kansas, 1985.

Soil Survey of Sedgwick County, Kansas, US Department of Agriculture, Soil Conservation Service, 1979.

Project: **Fontana**
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

OFFSITE

Total Area	230.00 Acres				
Soil Group	A	B	C	D	Total
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
	0%	40%	20%	40%	100%
Acres	0.00	92.00	46.00	92.00	230.00
Land Use	Commercial	Industrial	Multi-Family	Public	Single Family
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
Existing	0%	0%	0%	0%	10%
Acres	0.00	0.00	0.00	0.00	23.00
					Vacant/Agriculture
					(% of Total Area)
					90%
					207.00

Length of Flow
 Slope
 Waterflow Desc
 Avg Velocity
 Tc

Existing
 6500 ft
 0.22 %
 bare / short grass
 0.55 ft/sec
 3.28 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Existing Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	0.72	230.00	88.76
5	0.56	0.97	230.00	124.49
10	0.61	1.13	230.00	158.80
25	0.64	1.32	230.00	194.91
50	0.67	1.51	230.00	233.73
100	0.71	1.68	230.00	272.80

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin A

Total Area 18.11 Acres

Soil Group	A (% of Total Area)	B (% of Total Area)	C (% of Total Area)	D (% of Total Area)	Total
	0%	50%	0%	50%	100%
Acres	0.00	9.06	0.00	9.06	18.11

Land Use	Commercial (% of Total Area)	Industrial (% of Total Area)	Multi-Family (% of Total Area)	Public (% of Total Area)	Single Family (% of Total Area)	Vacant/Agriculture (% of Total Area)
Existing	0%	0%	0%	0%	0%	100%
Acres	0.00	0.00	0.00	0.00	0.00	18.11

Existing

Length of Flow 275 ft
 Slope 1.82 %
 Waterflow Desc bare / short grass
 Avg Velocity 0.55 ft/sec
 Tc 0.14 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Existing Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	3.83	18.11	37.46
5	0.56	4.56	18.11	46.25
10	0.61	5.22	18.11	57.67
25	0.64	6.06	18.11	70.24
50	0.67	6.78	18.11	82.27
100	0.70	7.37	18.11	93.43

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin B

Total Area

73.15 Acres

Soil Group

A	B	C	D	Total
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
0%	20%	60%	20%	100%
0.00	14.63	43.89	14.63	73.15

Acres

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	0%	100%
0.00	0.00	0.00	0.00	0.00	73.15

Existing

Acres

Existing

Length of Flow	3000 ft
Slope	0.50 %
Waterflow Desc	bare / short grass
Avg Velocity	0.55 ft/sec
Tc	1.52 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Existing Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	1.23	73.15	48.59
5	0.56	1.65	73.15	67.59
10	0.61	1.92	73.15	85.67
25	0.64	2.24	73.15	104.87
50	0.67	2.57	73.15	125.96
100	0.70	2.86	73.15	146.45

Project:
Date:
Prep. By:

Fontana
3/1/2004
BLB

Manual Input

Basin C

Total Area

26.26 Acres

Soil Group

A	B	C	D	Total
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
0%	70%	0%	30%	100%
0.00	18.38	0.00	7.88	26.26

Acres

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	0%	100%
0.00	0.00	0.00	0.00	0.00	26.26

Existing
Acres

Existing

Length of Flow
Slope
Waterflow Desc
Avg Velocity
T_c

2000 ft
0.70 %
bare / short grass
0.55 ft/sec
1.01 hours

15 min <= T_c <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Existing Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	1.67	26.26	23.68
5	0.56	2.13	26.26	31.32
10	0.61	2.51	26.26	40.21
25	0.64	2.95	26.26	49.58
50	0.67	3.34	26.26	58.76
100	0.70	3.70	26.26	68.01

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin D

Total Area

15.57 Acres

Soil Group

A	B	C	D	Total
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
0%	40%	0%	60%	100%
0.00	6.23	0.00	9.34	15.57

Acres

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	0%	100%
0.00	0.00	0.00	0.00	0.00	15.57

Existing

Acres

Existing

Length of Flow 1800 ft
 Slope 0.39 %
 Waterflow Desc bare / short grass
 Avg Velocity 0.55 ft/sec
 Tc 0.91 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Existing Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	1.81	15.57	15.22
5	0.56	2.27	15.57	19.79
10	0.61	2.67	15.57	25.36
25	0.64	3.14	15.57	31.29
50	0.67	3.55	15.57	37.03
100	0.70	3.92	15.57	42.72

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin E

Total Area

4.39 Acres

Soil Group

A	B	C	D	Total
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
0%	50%	0%	50%	100%
0.00	2.20	0.00	2.20	4.39

Acres

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	0%	100%
0.00	0.00	0.00	0.00	0.00	4.39

Existing

Acres

Existing

Length of Flow	450 ft
Slope	0.22 %
Waterflow Desc	bare / short grass
Avg Velocity	0.55 ft/sec
T _c	0.23 hours

15 min <= T_c <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Existing Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	3.83	4.39	9.08
5	0.56	4.56	4.39	11.21
10	0.61	5.22	4.39	13.98
25	0.64	6.06	4.39	17.03
50	0.67	6.78	4.39	19.94
100	0.70	7.37	4.39	22.65

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* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
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* RUN DATE 02MAR04 TIME 16:01:04
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*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
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X   X  XXXXXX  XXXXX      X
X   X  X      X   X      XX
X   X  X      X           X
XXXXXXX XXXX  X           XXXXX X
X   X  X      X           X
X   X  X      X   X      X
X   X  XXXXXX  XXXXX      XXX

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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
 NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
 DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION
 KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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1 ID FONTANA
2 ID EXISTING CONDITIONS
3 ID BY BLB DATE 03-02-04

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*** LIST ***
 *** FREE ***

*DIAGRAM

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4 IT 15 01JAN04 1200 0 02JAN04 2000
5 IN 15 01JAN04 1200
6 IO 0 5
7 JR PREC 7.8
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*
*
8 KK OFFST
9 BA 0.359
10 PB 1.00
11 PC 0.000 0.003 0.006 0.008 0.011 0.014 0.017 0.019 0.022 0.025
12 PC 0.029 0.032 0.035 0.038 0.042 0.045 0.048 0.052 0.056 0.060
13 PC 0.064 0.068 0.072 0.076 0.080 0.085 0.090 0.095 0.100 0.105
14 PC 0.110 0.115 0.120 0.127 0.134 0.140 0.147 0.155 0.163 0.172
15 PC 0.181 0.193 0.204 0.220 0.235 0.259 0.283 0.387 0.663 0.699

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16	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
17	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
18	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
19	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
20	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
21	LS	0	70	- 10							
22	UD	1.575									

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*

23	KK	BSNB									
24	BA	0.114									
25	PB	1.00									
26	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
27	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
28	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
29	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
30	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
31	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
32	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
33	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
34	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
35	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
36	LS	0	70	10							
37	UD	0.700									

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HEC-1 INPUT

PAGE 2

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

38	KK	BSNC									
39	BA	0.041									
40	PB	1.00									
41	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
42	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
43	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
44	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
45	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
46	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
47	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
48	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
49	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
50	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
51	LS	0	70	10							
52	UD	0.460									

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53	KK	BSND									
54	BA	0.024									
55	PB	1.00									
56	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
57	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
58	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
59	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
60	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
61	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
62	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903

63	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
64	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
65	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
66	LS	0	70	10							
67	UD	0.420									

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*

68	KK	OFFBC		
69	HC	4	0	

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*

70	ZZ
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1

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT

LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW

NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

8 OFFST

23 . BSNB

8 . BSNC

53 . BSND

68 OFFBC.....

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

*
* FLOOD HYDROGRAPH PACKAGE (HEC-1) *
* JUN 1998 *
* VERSION 4.1 *
*
* RUN DATE 02MAR04 TIME 16:01:04 *
*

*
* U.S. ARMY CORPS OF ENGINEERS *
* HYDROLOGIC ENGINEERING CENTER *
* 609 SECOND STREET *
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*

FONTANA
EXISTING CONDITIONS
BY BLB DATE 03-02-04

6 10

OUTPUT CONTROL VARIABLES

IPRNT	0	PRINT CONTROL
IPLOT	5	PLOT CONTROL
QSCAL	0.	HYDROGRAPH PLOT SCALE

.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

21 LS

SCS LOSS RATE

STRTL	.86	INITIAL ABSTRACTION
CRVNBR	70.00	CURVE NUMBER
RTIMP	10.00	PERCENT IMPERVIOUS AREA

22 UD

SCS DIMENSIONLESS UNITGRAPH

TLAG	1.58	LAG
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UNIT HYDROGRAPH

34 END-OF-PERIOD ORDINATES

6.	19.	38.	65.	88.	100.	102.	96.	86.	72.
55.	42.	33.	26.	21.	16.	13.	10.	8.	6.
5.	4.	3.	2.	2.	1.	1.	1.	1.	1.
0.	0.	0.	0.						

HYDROGRAPH AT STATION OFFST

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	1.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	1.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	1.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	1.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	1.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	1.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	1.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	1.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	1.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	1.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	1.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	1.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	1.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	1.
1	JAN	1530	15	.00	.00	.00	0.	*	2	JAN	0745	80	.00	.00	.00	1.
1	JAN	1545	16	.00	.00	.00	0.	*	2	JAN	0800	81	.00	.00	.00	1.
1	JAN	1600	17	.00	.00	.00	0.	*	2	JAN	0815	82	.00	.00	.00	1.
1	JAN	1615	18	.00	.00	.00	0.	*	2	JAN	0830	83	.00	.00	.00	1.
1	JAN	1630	19	.00	.00	.00	0.	*	2	JAN	0845	84	.00	.00	.00	1.
1	JAN	1645	20	.00	.00	.00	0.	*	2	JAN	0900	85	.00	.00	.00	1.
1	JAN	1700	21	.00	.00	.00	0.	*	2	JAN	0915	86	.00	.00	.00	1.
1	JAN	1715	22	.00	.00	.00	0.	*	2	JAN	0930	87	.00	.00	.00	0.
1	JAN	1730	23	.00	.00	.00	0.	*	2	JAN	0945	88	.00	.00	.00	0.
1	JAN	1745	24	.00	.00	.00	0.	*	2	JAN	1000	89	.00	.00	.00	0.
1	JAN	1800	25	.00	.00	.00	0.	*	2	JAN	1015	90	.00	.00	.00	0.
1	JAN	1815	26	.01	.00	.00	0.	*	2	JAN	1030	91	.00	.00	.00	0.
1	JAN	1830	27	.01	.00	.00	0.	*	2	JAN	1045	92	.00	.00	.00	0.
1	JAN	1845	28	.00	.00	.00	0.	*	2	JAN	1100	93	.00	.00	.00	0.
1	JAN	1900	29	.01	.00	.00	0.	*	2	JAN	1115	94	.00	.00	.00	0.
1	JAN	1915	30	.00	.00	.00	0.	*	2	JAN	1130	95	.00	.00	.00	0.

1 JAN 1930	31	.01	.00	.00	0.	*	2 JAN 1145	96	.00	.00	.00	0.
1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	1.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	1.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	1.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	1.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	1.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	1.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	1.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	1.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	1.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	2.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	3.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	4.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	5.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	5.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	5.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	5.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	5.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	4.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	4.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	3.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	3.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	2.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	2.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	2.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	1.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+ (CFS)	(HR)				
	(CFS)				
+ 5.	13.50	3.	1.	1.	1.
	(INCHES)	.069	.103	.104	.104
	(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .36 SQ MI

HYDROGRAPH AT STATION OFFST
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
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*

1 JAN 1200	1	.00	.00	.00	0.	*	2 JAN 0415	66	.04	.01	.03	77.
1 JAN 1215	2	.02	.02	.00	0.	*	2 JAN 0430	67	.03	.00	.03	70.
1 JAN 1230	3	.02	.02	.00	0.	*	2 JAN 0445	68	.04	.01	.03	64.
1 JAN 1245	4	.02	.01	.00	0.	*	2 JAN 0500	69	.03	.00	.03	58.
1 JAN 1300	5	.02	.02	.00	0.	*	2 JAN 0515	70	.04	.01	.03	53.
1 JAN 1315	6	.02	.02	.00	0.	*	2 JAN 0530	71	.03	.00	.03	49.
1 JAN 1330	7	.02	.02	.00	1.	*	2 JAN 0545	72	.04	.01	.03	45.
1 JAN 1345	8	.02	.01	.00	1.	*	2 JAN 0600	73	.03	.00	.03	41.
1 JAN 1400	9	.02	.02	.00	1.	*	2 JAN 0615	74	.04	.01	.03	39.
1 JAN 1415	10	.02	.02	.00	1.	*	2 JAN 0630	75	.03	.00	.03	36.
1 JAN 1430	11	.03	.03	.00	1.	*	2 JAN 0645	76	.03	.00	.03	34.
1 JAN 1445	12	.02	.02	.00	2.	*	2 JAN 0700	77	.04	.01	.03	33.
1 JAN 1500	13	.02	.02	.00	2.	*	2 JAN 0715	78	.03	.00	.03	32.
1 JAN 1515	14	.02	.02	.00	2.	*	2 JAN 0730	79	.04	.01	.03	31.
1 JAN 1530	15	.03	.03	.00	2.	*	2 JAN 0745	80	.03	.00	.03	30.
1 JAN 1545	16	.02	.02	.00	2.	*	2 JAN 0800	81	.04	.01	.03	29.
1 JAN 1600	17	.02	.02	.00	2.	*	2 JAN 0815	82	.02	.00	.02	29.
1 JAN 1615	18	.03	.03	.00	2.	*	2 JAN 0830	83	.02	.00	.02	28.
1 JAN 1630	19	.03	.03	.00	2.	*	2 JAN 0845	84	.02	.00	.02	28.
1 JAN 1645	20	.03	.03	.00	2.	*	2 JAN 0900	85	.02	.00	.02	27.
1 JAN 1700	21	.03	.03	.00	2.	*	2 JAN 0915	86	.02	.00	.02	26.
1 JAN 1715	22	.03	.03	.00	2.	*	2 JAN 0930	87	.02	.00	.02	25.
1 JAN 1730	23	.03	.03	.00	2.	*	2 JAN 0945	88	.02	.00	.02	24.
1 JAN 1745	24	.03	.03	.00	3.	*	2 JAN 1000	89	.02	.00	.02	23.
1 JAN 1800	25	.03	.03	.00	3.	*	2 JAN 1015	90	.02	.00	.02	22.
1 JAN 1815	26	.04	.04	.00	3.	*	2 JAN 1030	91	.02	.00	.02	21.
1 JAN 1830	27	.04	.04	.00	3.	*	2 JAN 1045	92	.02	.00	.02	21.
1 JAN 1845	28	.04	.04	.00	3.	*	2 JAN 1100	93	.02	.00	.02	20.
1 JAN 1900	29	.04	.04	.00	3.	*	2 JAN 1115	94	.02	.00	.02	20.
1 JAN 1915	30	.04	.04	.00	3.	*	2 JAN 1130	95	.02	.00	.02	20.
1 JAN 1930	31	.04	.04	.00	3.	*	2 JAN 1145	96	.02	.00	.02	20.
1 JAN 1945	32	.04	.03	.00	3.	*	2 JAN 1200	97	.02	.00	.02	19.
1 JAN 2000	33	.04	.03	.00	3.	*	2 JAN 1215	98	.00	.00	.00	19.
1 JAN 2015	34	.05	.05	.01	3.	*	2 JAN 1230	99	.00	.00	.00	19.
1 JAN 2030	35	.05	.05	.01	4.	*	2 JAN 1245	100	.00	.00	.00	18.
1 JAN 2045	36	.05	.04	.01	4.	*	2 JAN 1300	101	.00	.00	.00	16.
1 JAN 2100	37	.05	.04	.01	4.	*	2 JAN 1315	102	.00	.00	.00	15.
1 JAN 2115	38	.06	.05	.01	5.	*	2 JAN 1330	103	.00	.00	.00	13.
1 JAN 2130	39	.06	.05	.02	5.	*	2 JAN 1345	104	.00	.00	.00	10.
1 JAN 2145	40	.07	.05	.02	6.	*	2 JAN 1400	105	.00	.00	.00	8.
1 JAN 2200	41	.07	.05	.02	7.	*	2 JAN 1415	106	.00	.00	.00	7.
1 JAN 2215	42	.09	.06	.03	8.	*	2 JAN 1430	107	.00	.00	.00	5.
1 JAN 2230	43	.09	.06	.03	10.	*	2 JAN 1445	108	.00	.00	.00	4.
1 JAN 2245	44	.12	.08	.04	11.	*	2 JAN 1500	109	.00	.00	.00	3.
1 JAN 2300	45	.12	.07	.05	14.	*	2 JAN 1515	110	.00	.00	.00	3.
1 JAN 2315	46	.19	.11	.08	16.	*	2 JAN 1530	111	.00	.00	.00	2.
1 JAN 2330	47	.19	.10	.09	20.	*	2 JAN 1545	112	.00	.00	.00	2.
1 JAN 2345	48	.81	.37	.44	27.	*	2 JAN 1600	113	.00	.00	.00	1.
2 JAN 0000	49	2.15	.64	1.51	46.	*	2 JAN 1615	114	.00	.00	.00	1.
2 JAN 0015	50	.28	.06	.22	78.	*	2 JAN 1630	115	.00	.00	.00	1.
2 JAN 0030	51	.28	.06	.22	125.	*	2 JAN 1645	116	.00	.00	.00	1.
2 JAN 0045	52	.15	.03	.12	182.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	231.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	262.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	273.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	268.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.01	.06	251.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	225.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.05	193.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	165.	*	2 JAN 1900	125	.00	.00	.00	0.

2 JAN 0300	61	.05	.01	.05	143.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	125.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.05	109.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	96.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.05	85.	*						
						*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.16, TOTAL EXCESS = 4.64

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	32.00-HR
273.	13.50	136.	45.	34.	34.
	(INCHES)	3.529	4.622	4.644	4.644
	(AC-FT)	68.	88.	89.	89.

CUMULATIVE AREA = .36 SQ MI

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* *
* BSNB *
* *

5 IN TIME DATA FOR INPUT TIME SERIES
JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

24 BA SUBBASIN CHARACTERISTICS
TAREA .11 SUBBASIN AREA

PRECIPITATION DATA

25 PB STORM 1.00 BASIN TOTAL PRECIPITATION

26 PI INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

36 LS SCS LOSS RATE
STRTL .86 INITIAL ABSTRACTION

CRVNB 70.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

UD

SCS DIMENSIONLESS UNITGRAPH
TLAG .70 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
16 END-OF-PERIOD ORDINATES

13.	45.	66.	61.	44.	25.	16.	9.	6.	4.
2.	1.	1.	1.	0.	0.				

HYDROGRAPH AT STATION BSNB

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	0.
1	JAN	1530	15	.00	.00	.00	0.	*	2	JAN	0745	80	.00	.00	.00	0.
1	JAN	1545	16	.00	.00	.00	0.	*	2	JAN	0800	81	.00	.00	.00	0.
1	JAN	1600	17	.00	.00	.00	0.	*	2	JAN	0815	82	.00	.00	.00	0.
1	JAN	1615	18	.00	.00	.00	0.	*	2	JAN	0830	83	.00	.00	.00	0.
1	JAN	1630	19	.00	.00	.00	0.	*	2	JAN	0845	84	.00	.00	.00	0.
1	JAN	1645	20	.00	.00	.00	0.	*	2	JAN	0900	85	.00	.00	.00	0.
1	JAN	1700	21	.00	.00	.00	0.	*	2	JAN	0915	86	.00	.00	.00	0.
1	JAN	1715	22	.00	.00	.00	0.	*	2	JAN	0930	87	.00	.00	.00	0.
1	JAN	1730	23	.00	.00	.00	0.	*	2	JAN	0945	88	.00	.00	.00	0.
1	JAN	1745	24	.00	.00	.00	0.	*	2	JAN	1000	89	.00	.00	.00	0.
1	JAN	1800	25	.00	.00	.00	0.	*	2	JAN	1015	90	.00	.00	.00	0.
1	JAN	1815	26	.01	.00	.00	0.	*	2	JAN	1030	91	.00	.00	.00	0.
1	JAN	1830	27	.01	.00	.00	0.	*	2	JAN	1045	92	.00	.00	.00	0.
1	JAN	1845	28	.00	.00	.00	0.	*	2	JAN	1100	93	.00	.00	.00	0.
1	JAN	1900	29	.01	.00	.00	0.	*	2	JAN	1115	94	.00	.00	.00	0.
1	JAN	1915	30	.00	.00	.00	0.	*	2	JAN	1130	95	.00	.00	.00	0.
1	JAN	1930	31	.01	.00	.00	0.	*	2	JAN	1145	96	.00	.00	.00	0.
1	JAN	1945	32	.01	.00	.00	0.	*	2	JAN	1200	97	.00	.00	.00	0.
1	JAN	2000	33	.00	.00	.00	0.	*	2	JAN	1215	98	.00	.00	.00	0.
1	JAN	2015	34	.01	.01	.00	0.	*	2	JAN	1230	99	.00	.00	.00	0.
1	JAN	2030	35	.01	.01	.00	0.	*	2	JAN	1245	100	.00	.00	.00	0.
1	JAN	2045	36	.01	.01	.00	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.01	.01	.00	0.	*	2	JAN	1315	102	.00	.00	.00	0.

1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	1.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	1.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	2.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	3.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	3.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	2.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	2.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	1.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	1.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	1.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	1.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	3.	1.	0.	0.	0.
		(CFS)			
		(INCHES)	.070	.104	.104
		(AC-FT)	0.	1.	1.

CUMULATIVE AREA = .11 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSNB
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	2	JAN	0415	66	.04	.01	.03	14.
1	JAN	1215	2	.02	.02	.00	0.	2	JAN	0430	67	.03	.00	.03	13.
1	JAN	1230	3	.02	.02	.00	0.	2	JAN	0445	68	.04	.01	.03	12.
1	JAN	1245	4	.02	.01	.00	0.	2	JAN	0500	69	.03	.00	.03	11.
1	JAN	1300	5	.02	.02	.00	0.	2	JAN	0515	70	.04	.01	.03	10.

1 JAN 1315	6	.02	.02	.00	0.	*	2 JAN 0530	71	.03	.00	.03	10.
1 JAN 1330	7	.02	.02	.00	1.	*	2 JAN 0545	72	.04	.01	.03	9.
1 JAN 1345	8	.02	.01	.00	1.	*	2 JAN 0600	73	.03	.00	.03	9.
1 JAN 1400	9	.02	.02	.00	1.	*	2 JAN 0615	74	.04	.01	.03	9.
1 JAN 1415	10	.02	.02	.00	1.	*	2 JAN 0630	75	.03	.00	.03	9.
1 JAN 1430	11	.03	.03	.00	1.	*	2 JAN 0645	76	.03	.00	.03	9.
1 JAN 1445	12	.02	.02	.00	1.	*	2 JAN 0700	77	.04	.01	.03	9.
1 JAN 1500	13	.02	.02	.00	1.	*	2 JAN 0715	78	.03	.00	.03	9.
1 JAN 1515	14	.02	.02	.00	1.	*	2 JAN 0730	79	.04	.01	.03	9.
1 JAN 1530	15	.03	.03	.00	1.	*	2 JAN 0745	80	.03	.00	.03	9.
1 JAN 1545	16	.02	.02	.00	1.	*	2 JAN 0800	81	.04	.01	.03	9.
1 JAN 1600	17	.02	.02	.00	1.	*	2 JAN 0815	82	.02	.00	.02	9.
1 JAN 1615	18	.03	.03	.00	1.	*	2 JAN 0830	83	.02	.00	.02	8.
1 JAN 1630	19	.03	.03	.00	1.	*	2 JAN 0845	84	.02	.00	.02	8.
1 JAN 1645	20	.03	.03	.00	1.	*	2 JAN 0900	85	.02	.00	.02	7.
1 JAN 1700	21	.03	.03	.00	1.	*	2 JAN 0915	86	.02	.00	.02	7.
1 JAN 1715	22	.03	.03	.00	1.	*	2 JAN 0930	87	.02	.00	.02	6.
1 JAN 1730	23	.03	.03	.00	1.	*	2 JAN 0945	88	.02	.00	.02	6.
1 JAN 1745	24	.03	.03	.00	1.	*	2 JAN 1000	89	.02	.00	.02	6.
1 JAN 1800	25	.03	.03	.00	1.	*	2 JAN 1015	90	.02	.00	.02	6.
1 JAN 1815	26	.04	.04	.00	1.	*	2 JAN 1030	91	.02	.00	.02	6.
1 JAN 1830	27	.04	.04	.00	1.	*	2 JAN 1045	92	.02	.00	.02	6.
1 JAN 1845	28	.04	.04	.00	1.	*	2 JAN 1100	93	.02	.00	.02	6.
1 JAN 1900	29	.04	.04	.00	1.	*	2 JAN 1115	94	.02	.00	.02	6.
1 JAN 1915	30	.04	.04	.00	1.	*	2 JAN 1130	95	.02	.00	.02	6.
1 JAN 1930	31	.04	.04	.00	1.	*	2 JAN 1145	96	.02	.00	.02	6.
1 JAN 1945	32	.04	.03	.00	1.	*	2 JAN 1200	97	.02	.00	.02	6.
1 JAN 2000	33	.04	.03	.00	1.	*	2 JAN 1215	98	.00	.00	.00	6.
1 JAN 2015	34	.05	.05	.01	1.	*	2 JAN 1230	99	.00	.00	.00	5.
1 JAN 2030	35	.05	.05	.01	1.	*	2 JAN 1245	100	.00	.00	.00	3.
1 JAN 2045	36	.05	.04	.01	2.	*	2 JAN 1300	101	.00	.00	.00	2.
1 JAN 2100	37	.05	.04	.01	2.	*	2 JAN 1315	102	.00	.00	.00	1.
1 JAN 2115	38	.06	.05	.01	2.	*	2 JAN 1330	103	.00	.00	.00	1.
1 JAN 2130	39	.06	.05	.02	3.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	3.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	4.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.06	.03	5.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	5.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	7.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.07	.05	8.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.11	.08	10.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.10	.09	13.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.37	.44	21.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.64	1.51	54.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.06	.22	111.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	147.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	143.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	116.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	84.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	64.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	49.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.01	.06	39.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	32.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.05	26.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	22.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.05	19.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	17.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.05	16.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	15.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.05	15.	*						

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
11 END-OF-PERIOD ORDINATES

12. 33. 30. 16. 8. 4. 2. 1. 0. 0.

HYDROGRAPH AT STATION BSNC

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	0.
1	JAN	1530	15	.00	.00	.00	0.	*	2	JAN	0745	80	.00	.00	.00	0.
1	JAN	1545	16	.00	.00	.00	0.	*	2	JAN	0800	81	.00	.00	.00	0.
1	JAN	1600	17	.00	.00	.00	0.	*	2	JAN	0815	82	.00	.00	.00	0.
1	JAN	1615	18	.00	.00	.00	0.	*	2	JAN	0830	83	.00	.00	.00	0.
1	JAN	1630	19	.00	.00	.00	0.	*	2	JAN	0845	84	.00	.00	.00	0.
1	JAN	1645	20	.00	.00	.00	0.	*	2	JAN	0900	85	.00	.00	.00	0.
1	JAN	1700	21	.00	.00	.00	0.	*	2	JAN	0915	86	.00	.00	.00	0.
1	JAN	1715	22	.00	.00	.00	0.	*	2	JAN	0930	87	.00	.00	.00	0.
1	JAN	1730	23	.00	.00	.00	0.	*	2	JAN	0945	88	.00	.00	.00	0.
1	JAN	1745	24	.00	.00	.00	0.	*	2	JAN	1000	89	.00	.00	.00	0.
1	JAN	1800	25	.00	.00	.00	0.	*	2	JAN	1015	90	.00	.00	.00	0.
1	JAN	1815	26	.01	.00	.00	0.	*	2	JAN	1030	91	.00	.00	.00	0.
1	JAN	1830	27	.01	.00	.00	0.	*	2	JAN	1045	92	.00	.00	.00	0.
1	JAN	1845	28	.00	.00	.00	0.	*	2	JAN	1100	93	.00	.00	.00	0.
1	JAN	1900	29	.01	.00	.00	0.	*	2	JAN	1115	94	.00	.00	.00	0.
1	JAN	1915	30	.00	.00	.00	0.	*	2	JAN	1130	95	.00	.00	.00	0.
1	JAN	1930	31	.01	.00	.00	0.	*	2	JAN	1145	96	.00	.00	.00	0.
1	JAN	1945	32	.01	.00	.00	0.	*	2	JAN	1200	97	.00	.00	.00	0.
1	JAN	2000	33	.00	.00	.00	0.	*	2	JAN	1215	98	.00	.00	.00	0.
1	JAN	2015	34	.01	.01	.00	0.	*	2	JAN	1230	99	.00	.00	.00	0.
1	JAN	2030	35	.01	.01	.00	0.	*	2	JAN	1245	100	.00	.00	.00	0.
1	JAN	2045	36	.01	.01	.00	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.01	.01	.00	0.	*	2	JAN	1315	102	.00	.00	.00	0.
1	JAN	2115	38	.01	.01	.00	0.	*	2	JAN	1330	103	.00	.00	.00	0.
1	JAN	2130	39	.01	.01	.00	0.	*	2	JAN	1345	104	.00	.00	.00	0.
1	JAN	2145	40	.01	.01	.00	0.	*	2	JAN	1400	105	.00	.00	.00	0.
1	JAN	2200	41	.01	.01	.00	0.	*	2	JAN	1415	106	.00	.00	.00	0.
1	JAN	2215	42	.01	.01	.00	0.	*	2	JAN	1430	107	.00	.00	.00	0.

1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	1.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	1.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	1.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	1.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

FLOW		MAXIMUM AVERAGE FLOW			
TIME		6-HR	24-HR	72-HR	32.00-HR
(CFS)	(HR)				
1.	12.25	0.	0.	0.	0.
(INCHES)		.070	.104	.104	.104
(AC-FT)		0.	0.	0.	0.

CUMULATIVE AREA = .04 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSNC

PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN	1200	1		.00	.00	.00	0.	*	2 JAN	0415	66		.04	.01	.03	5.
1 JAN	1215	2		.02	.02	.00	0.	*	2 JAN	0430	67		.03	.00	.03	4.
1 JAN	1230	3		.02	.02	.00	0.	*	2 JAN	0445	68		.04	.01	.03	4.
1 JAN	1245	4		.02	.01	.00	0.	*	2 JAN	0500	69		.03	.00	.03	3.
1 JAN	1300	5		.02	.02	.00	0.	*	2 JAN	0515	70		.04	.01	.03	3.
1 JAN	1315	6		.02	.02	.00	0.	*	2 JAN	0530	71		.03	.00	.03	3.
1 JAN	1330	7		.02	.02	.00	0.	*	2 JAN	0545	72		.04	.01	.03	3.
1 JAN	1345	8		.02	.01	.00	0.	*	2 JAN	0600	73		.03	.00	.03	3.
1 JAN	1400	9		.02	.02	.00	0.	*	2 JAN	0615	74		.04	.01	.03	3.
1 JAN	1415	10		.02	.02	.00	0.	*	2 JAN	0630	75		.03	.00	.03	3.

1 JAN 1430	11	.03	.03	.00	0.	*	2 JAN 0645	76	.03	.00	.03	3.
1 JAN 1445	12	.02	.02	.00	0.	*	2 JAN 0700	77	.04	.01	.03	3.
1 JAN 1500	13	.02	.02	.00	0.	*	2 JAN 0715	78	.03	.00	.03	3.
1 JAN 1515	14	.02	.02	.00	0.	*	2 JAN 0730	79	.04	.01	.03	3.
1 JAN 1530	15	.03	.03	.00	0.	*	2 JAN 0745	80	.03	.00	.03	3.
1 JAN 1545	16	.02	.02	.00	0.	*	2 JAN 0800	81	.04	.01	.03	3.
1 JAN 1600	17	.02	.02	.00	0.	*	2 JAN 0815	82	.02	.00	.02	3.
1 JAN 1615	18	.03	.03	.00	0.	*	2 JAN 0830	83	.02	.00	.02	3.
1 JAN 1630	19	.03	.03	.00	0.	*	2 JAN 0845	84	.02	.00	.02	2.
1 JAN 1645	20	.03	.03	.00	0.	*	2 JAN 0900	85	.02	.00	.02	2.
1 JAN 1700	21	.03	.03	.00	0.	*	2 JAN 0915	86	.02	.00	.02	2.
1 JAN 1715	22	.03	.03	.00	0.	*	2 JAN 0930	87	.02	.00	.02	2.
1 JAN 1730	23	.03	.03	.00	0.	*	2 JAN 0945	88	.02	.00	.02	2.
1 JAN 1745	24	.03	.03	.00	0.	*	2 JAN 1000	89	.02	.00	.02	2.
1 JAN 1800	25	.03	.03	.00	0.	*	2 JAN 1015	90	.02	.00	.02	2.
1 JAN 1815	26	.04	.04	.00	0.	*	2 JAN 1030	91	.02	.00	.02	2.
1 JAN 1830	27	.04	.04	.00	0.	*	2 JAN 1045	92	.02	.00	.02	2.
1 JAN 1845	28	.04	.04	.00	0.	*	2 JAN 1100	93	.02	.00	.02	2.
1 JAN 1900	29	.04	.04	.00	0.	*	2 JAN 1115	94	.02	.00	.02	2.
1 JAN 1915	30	.04	.04	.00	0.	*	2 JAN 1130	95	.02	.00	.02	2.
1 JAN 1930	31	.04	.04	.00	0.	*	2 JAN 1145	96	.02	.00	.02	2.
1 JAN 1945	32	.04	.03	.00	0.	*	2 JAN 1200	97	.02	.00	.02	2.
1 JAN 2000	33	.04	.03	.00	0.	*	2 JAN 1215	98	.00	.00	.00	2.
1 JAN 2015	34	.05	.05	.01	1.	*	2 JAN 1230	99	.00	.00	.00	1.
1 JAN 2030	35	.05	.05	.01	1.	*	2 JAN 1245	100	.00	.00	.00	1.
1 JAN 2045	36	.05	.04	.01	1.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.05	.04	.01	1.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.06	.05	.01	1.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.06	.05	.02	1.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	2.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.06	.03	2.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	2.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	3.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.07	.05	4.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.11	.08	5.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.10	.09	6.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.37	.44	12.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.64	1.51	37.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.06	.22	68.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	63.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	43.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	29.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	20.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	15.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	12.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.01	.06	10.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	8.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.05	7.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	6.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.05	6.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	5.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.05	5.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	5.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.05	5.	*						

*

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.16, TOTAL EXCESS = 4.64

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
68.	12.25	16.	5.	4.	4.
(INCHES)		3.635	4.636	4.644	4.644
(AC-FT)		8.	10.	10.	10.

CUMULATIVE AREA = .04 SQ MI

*** **

53 KK

* BSND *

5 IN
TIME DATA FOR INPUT TIME SERIES
JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

BA
SUBBASIN CHARACTERISTICS
TAREA .02 SUBBASIN AREA

PRECIPITATION DATA

55 PB
STORM 1.00 BASIN TOTAL PRECIPITATION

56 PI
INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

66 LS
SCS LOSS RATE
STRTL .86 INITIAL ABSTRACTION
CRVNBR 70.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

67 UD
SCS DIMENSIONLESS UNITGRAPH
TLAG .42 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
10 END-OF-PERIOD ORDINATES

9. 21. 17. 8. 4. 2. 1. 0. 0. 0.

HYDROGRAPH AT STATION BSND

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	0.
1	JAN	1530	15	.00	.00	.00	0.	*	2	JAN	0745	80	.00	.00	.00	0.
1	JAN	1545	16	.00	.00	.00	0.	*	2	JAN	0800	81	.00	.00	.00	0.
1	JAN	1600	17	.00	.00	.00	0.	*	2	JAN	0815	82	.00	.00	.00	0.
1	JAN	1615	18	.00	.00	.00	0.	*	2	JAN	0830	83	.00	.00	.00	0.
1	JAN	1630	19	.00	.00	.00	0.	*	2	JAN	0845	84	.00	.00	.00	0.
1	JAN	1645	20	.00	.00	.00	0.	*	2	JAN	0900	85	.00	.00	.00	0.
1	JAN	1700	21	.00	.00	.00	0.	*	2	JAN	0915	86	.00	.00	.00	0.
1	JAN	1715	22	.00	.00	.00	0.	*	2	JAN	0930	87	.00	.00	.00	0.
1	JAN	1730	23	.00	.00	.00	0.	*	2	JAN	0945	88	.00	.00	.00	0.
1	JAN	1745	24	.00	.00	.00	0.	*	2	JAN	1000	89	.00	.00	.00	0.
1	JAN	1800	25	.00	.00	.00	0.	*	2	JAN	1015	90	.00	.00	.00	0.
1	JAN	1815	26	.01	.00	.00	0.	*	2	JAN	1030	91	.00	.00	.00	0.
1	JAN	1830	27	.01	.00	.00	0.	*	2	JAN	1045	92	.00	.00	.00	0.
1	JAN	1845	28	.00	.00	.00	0.	*	2	JAN	1100	93	.00	.00	.00	0.
1	JAN	1900	29	.01	.00	.00	0.	*	2	JAN	1115	94	.00	.00	.00	0.
1	JAN	1915	30	.00	.00	.00	0.	*	2	JAN	1130	95	.00	.00	.00	0.
1	JAN	1930	31	.01	.00	.00	0.	*	2	JAN	1145	96	.00	.00	.00	0.
1	JAN	1945	32	.01	.00	.00	0.	*	2	JAN	1200	97	.00	.00	.00	0.
1	JAN	2000	33	.00	.00	.00	0.	*	2	JAN	1215	98	.00	.00	.00	0.
1	JAN	2015	34	.01	.01	.00	0.	*	2	JAN	1230	99	.00	.00	.00	0.
1	JAN	2030	35	.01	.01	.00	0.	*	2	JAN	1245	100	.00	.00	.00	0.
1	JAN	2045	36	.01	.01	.00	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.01	.01	.00	0.	*	2	JAN	1315	102	.00	.00	.00	0.
1	JAN	2115	38	.01	.01	.00	0.	*	2	JAN	1330	103	.00	.00	.00	0.
1	JAN	2130	39	.01	.01	.00	0.	*	2	JAN	1345	104	.00	.00	.00	0.
1	JAN	2145	40	.01	.01	.00	0.	*	2	JAN	1400	105	.00	.00	.00	0.
1	JAN	2200	41	.01	.01	.00	0.	*	2	JAN	1415	106	.00	.00	.00	0.
1	JAN	2215	42	.01	.01	.00	0.	*	2	JAN	1430	107	.00	.00	.00	0.
1	JAN	2230	43	.01	.01	.00	0.	*	2	JAN	1445	108	.00	.00	.00	0.
1	JAN	2245	44	.02	.01	.00	0.	*	2	JAN	1500	109	.00	.00	.00	0.
1	JAN	2300	45	.02	.01	.00	0.	*	2	JAN	1515	110	.00	.00	.00	0.
1	JAN	2315	46	.02	.02	.00	0.	*	2	JAN	1530	111	.00	.00	.00	0.
1	JAN	2330	47	.02	.02	.00	0.	*	2	JAN	1545	112	.00	.00	.00	0.
1	JAN	2345	48	.10	.09	.01	0.	*	2	JAN	1600	113	.00	.00	.00	0.

2 JAN 0000	49	.28	.25	.03	1.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	1.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	0.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	0.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	32.00-HR
1.	12.25	0.	0.	0.	0.
(INCHES)		.070	.104	.104	.104
(AC-FT)		0.	0.	0.	0.

CUMULATIVE AREA = .02 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSND
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 1200	1	.00	.00	.00	0.	*			2 JAN 0415	66	.04	.01	.03	3.		
1 JAN 1215	2	.02	.02	.00	0.	*			2 JAN 0430	67	.03	.00	.03	2.		
1 JAN 1230	3	.02	.02	.00	0.	*			2 JAN 0445	68	.04	.01	.03	2.		
1 JAN 1245	4	.02	.01	.00	0.	*			2 JAN 0500	69	.03	.00	.03	2.		
1 JAN 1300	5	.02	.02	.00	0.	*			2 JAN 0515	70	.04	.01	.03	2.		
1 JAN 1315	6	.02	.02	.00	0.	*			2 JAN 0530	71	.03	.00	.03	2.		
1 JAN 1330	7	.02	.02	.00	0.	*			2 JAN 0545	72	.04	.01	.03	2.		
1 JAN 1345	8	.02	.01	.00	0.	*			2 JAN 0600	73	.03	.00	.03	2.		
1 JAN 1400	9	.02	.02	.00	0.	*			2 JAN 0615	74	.04	.01	.03	2.		
1 JAN 1415	10	.02	.02	.00	0.	*			2 JAN 0630	75	.03	.00	.03	2.		
1 JAN 1430	11	.03	.03	.00	0.	*			2 JAN 0645	76	.03	.00	.03	2.		
1 JAN 1445	12	.02	.02	.00	0.	*			2 JAN 0700	77	.04	.01	.03	2.		
1 JAN 1500	13	.02	.02	.00	0.	*			2 JAN 0715	78	.03	.00	.03	2.		
1 JAN 1515	14	.02	.02	.00	0.	*			2 JAN 0730	79	.04	.01	.03	2.		
1 JAN 1530	15	.03	.03	.00	0.	*			2 JAN 0745	80	.03	.00	.03	2.		
1 JAN 1545	16	.02	.02	.00	0.	*			2 JAN 0800	81	.04	.01	.03	2.		

1 JAN 1600	17	.02	.02	.00	0.	*	2 JAN 0815	82	.02	.00	.02	2.
1 JAN 1615	18	.03	.03	.00	0.	*	2 JAN 0830	83	.02	.00	.02	2.
1 JAN 1630	19	.03	.03	.00	0.	*	2 JAN 0845	84	.02	.00	.02	1.
1 JAN 1645	20	.03	.03	.00	0.	*	2 JAN 0900	85	.02	.00	.02	1.
1 JAN 1700	21	.03	.03	.00	0.	*	2 JAN 0915	86	.02	.00	.02	1.
1 JAN 1715	22	.03	.03	.00	0.	*	2 JAN 0930	87	.02	.00	.02	1.
1 JAN 1730	23	.03	.03	.00	0.	*	2 JAN 0945	88	.02	.00	.02	1.
1 JAN 1745	24	.03	.03	.00	0.	*	2 JAN 1000	89	.02	.00	.02	1.
1 JAN 1800	25	.03	.03	.00	0.	*	2 JAN 1015	90	.02	.00	.02	1.
1 JAN 1815	26	.04	.04	.00	0.	*	2 JAN 1030	91	.02	.00	.02	1.
1 JAN 1830	27	.04	.04	.00	0.	*	2 JAN 1045	92	.02	.00	.02	1.
1 JAN 1845	28	.04	.04	.00	0.	*	2 JAN 1100	93	.02	.00	.02	1.
1 JAN 1900	29	.04	.04	.00	0.	*	2 JAN 1115	94	.02	.00	.02	1.
1 JAN 1915	30	.04	.04	.00	0.	*	2 JAN 1130	95	.02	.00	.02	1.
1 JAN 1930	31	.04	.04	.00	0.	*	2 JAN 1145	96	.02	.00	.02	1.
1 JAN 1945	32	.04	.03	.00	0.	*	2 JAN 1200	97	.02	.00	.02	1.
1 JAN 2000	33	.04	.03	.00	0.	*	2 JAN 1215	98	.00	.00	.00	1.
1 JAN 2015	34	.05	.05	.01	0.	*	2 JAN 1230	99	.00	.00	.00	1.
1 JAN 2030	35	.05	.05	.01	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.05	.04	.01	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.05	.04	.01	1.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.06	.05	.01	1.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.06	.05	.02	1.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	1.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.06	.03	1.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	2.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.07	.05	2.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.11	.08	3.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.10	.09	4.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.37	.44	8.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.64	1.51	25.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.06	.22	43.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	36.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	23.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	16.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	11.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	8.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	7.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.01	.06	5.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	5.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.05	4.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	3.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.05	3.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	3.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.05	3.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	3.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.05	3.	*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.16, TOTAL EXCESS = 4.64

+ (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
43.	12.25	9.	3.	2.	2.
	(INCHES)	3.636	4.636	4.644	4.644

(AC-FT) 5. 6. 6. 6.

CUMULATIVE AREA = .02 SQ MI

*** **

68 KK * OFFBC *

69 HC HYDROGRAPH COMBINATION
ICOMP 4 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION OFFBC
SUM OF 4 HYDROGRAPHS
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1	JAN	1200	1	0.	*	1	JAN	2015	34	5.	*	2	JAN	0430	67	90.	*	2	JAN	1245	100	22.
1	JAN	1215	2	0.	*	1	JAN	2030	35	6.	*	2	JAN	0445	68	82.	*	2	JAN	1300	101	19.
1	JAN	1230	3	0.	*	1	JAN	2045	36	7.	*	2	JAN	0500	69	75.	*	2	JAN	1315	102	16.
1	JAN	1245	4	1.	*	1	JAN	2100	37	8.	*	2	JAN	0515	70	69.	*	2	JAN	1330	103	13.
1	JAN	1300	5	1.	*	1	JAN	2115	38	9.	*	2	JAN	0530	71	63.	*	2	JAN	1345	104	11.
1	JAN	1315	6	1.	*	1	JAN	2130	39	10.	*	2	JAN	0545	72	59.	*	2	JAN	1400	105	9.
1	JAN	1330	7	2.	*	1	JAN	2145	40	12.	*	2	JAN	0600	73	56.	*	2	JAN	1415	106	7.
1	JAN	1345	8	2.	*	1	JAN	2200	41	14.	*	2	JAN	0615	74	52.	*	2	JAN	1430	107	5.
1	JAN	1400	9	2.	*	1	JAN	2215	42	16.	*	2	JAN	0630	75	50.	*	2	JAN	1445	108	4.
1	JAN	1415	10	2.	*	1	JAN	2230	43	19.	*	2	JAN	0645	76	48.	*	2	JAN	1500	109	3.
1	JAN	1430	11	2.	*	1	JAN	2245	44	23.	*	2	JAN	0700	77	46.	*	2	JAN	1515	110	3.
1	JAN	1445	12	3.	*	1	JAN	2300	45	27.	*	2	JAN	0715	78	45.	*	2	JAN	1530	111	2.
1	JAN	1500	13	3.	*	1	JAN	2315	46	34.	*	2	JAN	0730	79	44.	*	2	JAN	1545	112	2.
1	JAN	1515	14	3.	*	1	JAN	2330	47	43.	*	2	JAN	0745	80	44.	*	2	JAN	1600	113	1.
1	JAN	1530	15	3.	*	1	JAN	2345	48	68.	*	2	JAN	0800	81	43.	*	2	JAN	1615	114	1.
1	JAN	1545	16	3.	*	2	JAN	0000	49	162.	*	2	JAN	0815	82	42.	*	2	JAN	1630	115	1.
1	JAN	1600	17	3.	*	2	JAN	0015	50	299.	*	2	JAN	0830	83	41.	*	2	JAN	1645	116	1.
1	JAN	1615	18	3.	*	2	JAN	0030	51	371.	*	2	JAN	0845	84	39.	*	2	JAN	1700	117	0.
1	JAN	1630	19	3.	*	2	JAN	0045	52	391.	*	2	JAN	0900	85	38.	*	2	JAN	1715	118	0.
1	JAN	1645	20	4.	*	2	JAN	0100	53	392.	*	2	JAN	0915	86	36.	*	2	JAN	1730	119	0.
1	JAN	1700	21	4.	*	2	JAN	0115	54	378.	*	2	JAN	0930	87	35.	*	2	JAN	1745	120	0.
1	JAN	1715	22	4.	*	2	JAN	0130	55	361.	*	2	JAN	0945	88	34.	*	2	JAN	1800	121	0.
1	JAN	1730	23	4.	*	2	JAN	0145	56	336.	*	2	JAN	1000	89	32.	*	2	JAN	1815	122	0.
1	JAN	1745	24	4.	*	2	JAN	0200	57	306.	*	2	JAN	1015	90	32.	*	2	JAN	1830	123	0.
1	JAN	1800	25	4.	*	2	JAN	0215	58	270.	*	2	JAN	1030	91	31.	*	2	JAN	1845	124	0.
1	JAN	1815	26	4.	*	2	JAN	0230	59	230.	*	2	JAN	1045	92	30.	*	2	JAN	1900	125	0.
1	JAN	1830	27	4.	*	2	JAN	0245	60	197.	*	2	JAN	1100	93	30.	*	2	JAN	1915	126	0.
1	JAN	1845	28	4.	*	2	JAN	0300	61	171.	*	2	JAN	1115	94	29.	*	2	JAN	1930	127	0.
1	JAN	1900	29	5.	*	2	JAN	0315	62	150.	*	2	JAN	1130	95	29.	*	2	JAN	1945	128	0.

1 JAN 1915	30	5.	*	2 JAN 0330	63	134.	*	2 JAN 1145	96	29.	*	2 JAN 2000	129	0.
1 JAN 1930	31	5.	*	2 JAN 0345	64	120.	*	2 JAN 1200	97	29.	*			
1 JAN 1945	32	5.	*	2 JAN 0400	65	109.	*	2 JAN 1215	98	28.	*			
1 JAN 2000	33	5.	*	2 JAN 0415	66	99.	*	2 JAN 1230	99	25.	*			
			*				*				*			

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
392.	13.00	205.	67.	50.	50.
		(INCHES) 3.540	4.621	4.644	4.644
		(AC-FT) 102.	133.	133.	133.

CUMULATIVE AREA = .54 SQ MI

1

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
 TIME TO PEAK IN HOURS

OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION	
				RATIO 1	
				7.80	
HYDROGRAPH AT					
+	OFFST	.36	1	FLOW	273.
				TIME	13.50
HYDROGRAPH AT					
+	BSNB	.11	1	FLOW	147.
				TIME	12.50
HYDROGRAPH AT					
+	BSNC	.04	1	FLOW	68.
				TIME	12.25
HYDROGRAPH AT					
+	BSND	.02	1	FLOW	43.
				TIME	12.25
4 COMBINED AT					
+	OFFBC	.54	1	FLOW	392.
				TIME	13.00

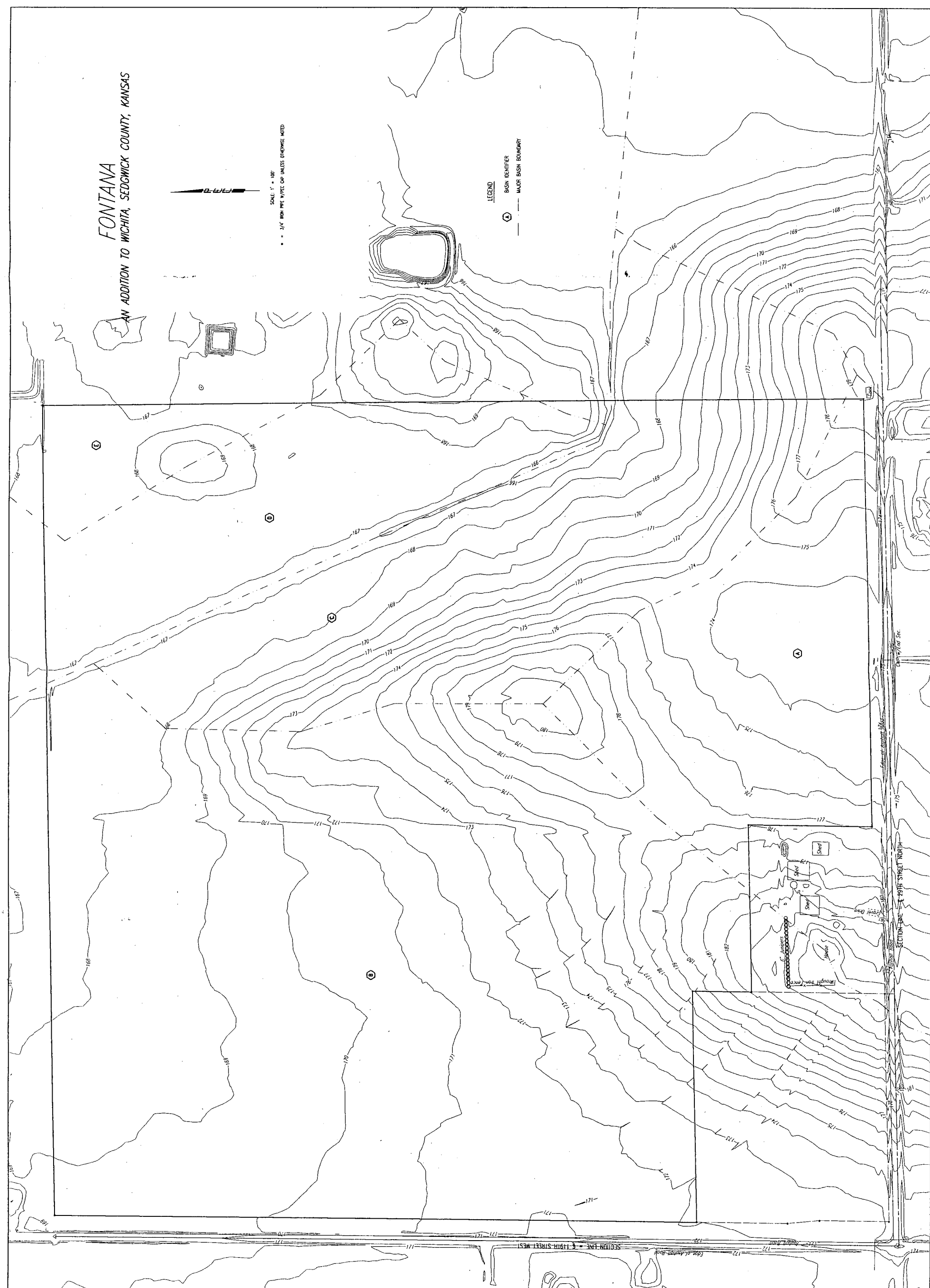
*** NORMAL END OF HEC-1 ***



FONTANA
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

SCALE 1" = 100'
• 1/4" BOLD TYPE OR HIGHER DENOTES WORD

LEGEND
BOLD LETTERS
MAJOR ROAD ROUTES



DATE: 08-18-00 SCALE: 1"=100'
DRAWN BY: J. L. B. (JLB) DATE: 08-18-00
CHECKED BY: J. L. B. (JLB) DATE: 08-18-00
APPROVED BY: J. L. B. (JLB) DATE: 08-18-00

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

OFFSITE

Total Area	230.00 Acres				
Soil Group	A	B	C	D	Total
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
	0%	40%	20%	40%	100%
Acres	0.00	92.00	46.00	92.00	230.00
Land Use	Commercial	Industrial	Multi-Family	Public	Single Family
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
Future	0%	0%	0%	0%	10%
Acres	0.00	0.00	0.00	0.00	23.00
					207.00

Length of Flow
 Slope
 Waterflow Desc
 Avg Velocity
 Tc

Future

6500 ft
 0.22 %
 bare / short grass
 0.55 ft/sec
 3.28 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.54	0.72	230.00	88.76
5	0.56	0.97	230.00	124.49
10	0.61	1.13	230.00	158.80
25	0.64	1.32	230.00	194.91
50	0.67	1.51	230.00	233.73
100	0.71	1.68	230.00	272.80

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 1

Total Area 5.22 Acres

Soil Group	A (% of Total Area)	B (% of Total Area)	C (% of Total Area)	D (% of Total Area)	Total
	0%	20%	0%	80%	100%
Acres	0.00	1.04	0.00	4.18	5.22

Land Use	Commercial (% of Total Area)	Industrial (% of Total Area)	Multi-Family (% of Total Area)	Public (% of Total Area)	Single Family (% of Total Area)	Vacant/Agriculture (% of Total Area)
Future	0%	0%	0%	0%	80%	20%
Acres	0.00	0.00	0.00	0.00	4.18	1.04

Future

Length of Flow 775 ft
 Slope 0.77 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 Tc 0.90 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.84	5.22	4.88
5	0.54	2.30	5.22	6.53
10	0.62	2.70	5.22	8.71
25	0.66	3.17	5.22	10.86
50	0.69	3.59	5.22	13.01
100	0.75	3.96	5.22	15.46

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 2

Total Area 15.88 Acres

Soil Group	A	B	C	D	Total
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
	0%	100%	0%	0%	100%
Acres	0.00	15.88	0.00	0.00	15.88

Land Use	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
Future	0%	0%	0%	0%	80%	20%
Acres	0.00	0.00	0.00	0.00	12.70	3.18

Future

Length of Flow 1450 ft
 Slope 0.83 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 Tc 1.68 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.13	15.88	9.12
5	0.54	1.52	15.88	13.13
10	0.62	1.77	15.88	17.37
25	0.66	2.07	15.88	21.56
50	0.69	2.39	15.88	26.34
100	0.75	2.65	15.88	31.48

Project: Fontana
 Date: 3/4/2004
 Prep. By: BLB

Manual Input

Basin 3

Total Area 15.18 Acres

Soil Group

A	B	C	D	Total
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
0%	60%	0%	40%	100%
0.00	9.11	0.00	6.07	15.18

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	80%	20%
0.00	0.00	0.00	0.00	12.14	3.04

Future

Acres

Future

Length of Flow 1300 ft
 Slope 1.15 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 1.50 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.24	15.18	9.56
5	0.54	1.66	15.18	13.71
10	0.62	1.93	15.18	18.11
25	0.66	2.26	15.18	22.51
50	0.69	2.59	15.18	27.29
100	0.75	2.88	15.18	32.70

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 4

Total Area 12.52 Acres

Soil Group	A (% of Total Area)	B (% of Total Area)	C (% of Total Area)	D (% of Total Area)	Total
	0%	80%	10%	10%	100%
Acres	0.00	10.02	1.25	1.25	12.52

Land Use	Commercial (% of Total Area)	Industrial (% of Total Area)	Multi-Family (% of Total Area)	Public (% of Total Area)	Single Family (% of Total Area)	Vacant/Agriculture (% of Total Area)
Future	0%	0%	0%	0%	80%	20%
Acres	0.00	0.00	0.00	0.00	10.02	2.50

Future

Length of Flow 1675 ft
 Slope 0.90 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 Tc 1.94 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.02	12.52	6.49
5	0.54	1.36	12.52	9.26
10	0.62	1.59	12.52	12.30
25	0.66	1.86	12.52	15.28
50	0.69	2.12	12.52	18.42
100	0.75	2.36	12.52	22.10

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 5

Total Area	14.88 Acres					
Soil Group	A	B	C	D	Total	
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)		
	0%	10%	10%	80%	100%	
Acres	0.00	1.49	1.49	11.90	14.88	
Land Use	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
Future	0%	0%	0%	0%	80%	20%
Acres	0.00	0.00	0.00	0.00	11.90	2.98
Length of Flow	Future					
Slope	1300 ft					
Waterflow Desc	lawns / short grass					
Avg Velocity	0.24 ft/sec					
Tc	1.50 hours					

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.24	14.88	9.37
5	0.54	1.66	14.88	13.44
10	0.62	1.93	14.88	17.75
25	0.66	2.26	14.88	22.06
50	0.69	2.59	14.88	26.75
100	0.75	2.88	14.88	32.06

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 6

Total Area 4.85 Acres

Soil Group	A	B	C	D	Total
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
	0%	0%	100%	0%	100%
Acres	0.00	0.00	4.85	0.00	4.85

Land Use	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
Future	0%	0%	0%	0%	80%	20%
Acres	0.00	0.00	0.00	0.00	3.88	0.97

Future

Length of Flow 1100 ft
 Slope 0.38 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 Tc 1.27 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.41	4.85	3.47
5	0.54	1.85	4.85	4.88
10	0.62	2.19	4.85	6.56
25	0.66	2.58	4.85	8.21
50	0.69	2.93	4.85	9.86
100	0.75	3.26	4.85	11.83

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 7

Total Area

35.33 Acres

Soil Group

Total

A	B	C	D
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	50%	50%	0%
0.00	17.67	17.67	0.00

100%

Acres

35.33

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	80%	20%
0.00	0.00	0.00	0.00	28.26	7.07

Future

Acres

Future

1875 ft

0.21 %

lawns / short grass

0.24 ft/sec

2.17 hours

Length of Flow

Slope

Waterflow Desc

Avg Velocity

Tc

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	0.99	35.33	17.77
5	0.54	1.33	35.33	25.56
10	0.62	1.55	35.33	33.84
25	0.66	1.81	35.33	41.95
50	0.69	2.07	35.33	50.75
100	0.75	2.30	35.33	60.78

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 8

Total Area 17.25 Acres

Soil Group	A (% of Total Area)	B (% of Total Area)	C (% of Total Area)	D (% of Total Area)	Total
	0%	50%	0%	50%	100%
Acres	0.00	8.63	0.00	8.63	17.25

Land Use	Commercial (% of Total Area)	Industrial (% of Total Area)	Multi-Family (% of Total Area)	Public (% of Total Area)	Single Family (% of Total Area)	Vacant/Agriculture (% of Total Area)
Future	0%	0%	0%	0%	80%	20%
Acres	0.00	0.00	0.00	0.00	13.80	3.45

Future

Length of Flow 1200 ft
 Slope 0.80 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 Tc 1.39 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.32	17.25	11.57
5	0.54	1.74	17.25	16.33
10	0.62	2.06	17.25	21.96
25	0.66	2.41	17.25	27.27
50	0.69	2.76	17.25	33.04
100	0.75	3.07	17.25	39.61

Project: Fontana
 Date: 3/1/2004
 Prep. By: BLB

Manual Input

Basin 9

Total Area

2.70 Acres

Soil Group

A	B	C	D	Total
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	
0%	75%	0%	25%	100%
0.00	2.03	0.00	0.68	2.70

Acres

Land Use

Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)	(% of Total Area)
0%	0%	0%	0%	80%	20%
0.00	0.00	0.00	0.00	2.16	0.54

Future

Acres

Future

Length of Flow 650 ft
 Slope 0.31 %
 Waterflow Desc lawns / short grass
 Avg Velocity 0.24 ft/sec
 Tc 0.75 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	2.08	2.70	2.85
5	0.54	2.57	2.70	3.77
10	0.62	3.01	2.70	5.02
25	0.66	3.52	2.70	6.23
50	0.69	3.98	2.70	7.46
100	0.75	4.38	2.70	8.85

Project: Fontana
 Date: 3/4/2004
 Prep. By: BLB

Manual Input

Basin 10

Total Area

13.69 Acres

Soil Group

Total

A (% of Total Area) 0% 0.00

B (% of Total Area) 60% 8.21

C (% of Total Area) 0% 0.00

D (% of Total Area) 40% 5.48

100% 13.69

Acres

Land Use

Vacant/Agriculture

Single Family

Public

Multi-Family

Industrial

Commercial

(% of Total Area) 20% 2.74

(% of Total Area) 80% 10.95

(% of Total Area) 0% 0.00

(% of Total Area) 0% 0.00

(% of Total Area) 0% 0.00

(% of Total Area) 0% 0.00

Future

Acres

Future

Length of Flow

1450 ft

Slope

0.97 %

Waterflow Desc

lawns / short grass

Avg Velocity 0.24 ft/sec

1.68 hours

15 min <= Tc <= 24 hrs

Runoff Coefficients * Used Soil Group D To Be Conservative

Return Period (Years)	Commercial	Industrial	Multi-Family	Public	Single Family	Vacant/Agriculture
2	0.68	0.68	0.70	0.49	0.50	0.54
5	0.69	0.69	0.73	0.51	0.54	0.56
10	0.73	0.73	0.79	0.56	0.62	0.61
25	0.75	0.75	0.81	0.59	0.66	0.64
50	0.77	0.77	0.83	0.62	0.70	0.67
100	0.80	0.80	0.86	0.66	0.76	0.70

Future Conditions

Return Period (Years)	Runoff Coefficient *	Rainfall Intensity (in/hr)	Area (Acres)	Runoff (cfs)
2	0.51	1.13	13.69	7.86
5	0.54	1.52	13.69	11.32
10	0.62	1.77	13.69	14.97
25	0.66	2.07	13.69	18.59
50	0.69	2.39	13.69	22.71
100	0.75	2.65	13.69	27.14

SUB-BASIN CALCULATIONS

Runoff Coefficients

C2 0.44
C100 0.61

Intensity

Tc 15 min
i2 3.5 in/hr
i100 7.8 in/hr

Basin	Node	Area	Q2	Q100
1A	N/A	2.76	4.25	20.22
1B	N/A	0.89	1.37	6.52
1C	N/A	1.57	2.42	11.50
2A	133	1.00	1.54	7.33
2B	132	1.50	2.31	10.99
2C	160	2.09	3.22	15.31
2D	150	1.00	1.54	7.33
2E	140	1.52	2.34	11.14
2F	121	1.32	2.03	9.67
2G	120	2.42	3.73	17.73
2H	110	1.34	2.06	9.82
2I	210	2.20	3.39	16.12
2J	N/A	1.48	2.28	10.84
3A	340	0.95	1.46	6.96
3B	330	1.60	2.46	11.72
3C	320	2.91	4.48	21.32
3D	310	1.16	1.79	8.50
3E	N/A	8.55	13.17	62.65
4A	850	1.27	1.96	9.31
4B	840	1.19	1.83	8.72
4C	831	1.34	2.06	9.82
4D	830	1.61	2.48	11.80
4E	820	0.68	1.05	4.98
4F	810	0.69	1.06	5.06
4G	N/A	5.75	8.86	42.13
5A	N/A	8.25	12.71	60.45
5B	910	1.05	1.62	7.69
5C	920	0.93	1.43	6.81
5D	930	1.65	2.54	12.09
5E	950	1.07	1.65	7.84
5F	960	1.23	1.89	9.01
5G	941	0.71	1.09	5.20
6A	N/A	0.49	0.75	3.59
6B	N/A	2.21	3.40	16.19
6C	N/A	0.97	1.49	7.11
6D	N/A	1.19	1.83	8.72
7A	N/A	14.70	22.64	107.71

7B	710	0.84	1.29	6.15
7C	720	0.77	1.19	5.64
7D	730	1.16	1.79	8.50
7E	740	1.28	1.97	9.38
7F	750	1.43	2.20	10.48
7G	741	0.87	1.34	6.37
7H	742	0.98	1.51	7.18
7I	1010	2.32	3.57	17.00
7J	1020	2.05	3.16	15.02
7K	620	2.60	4.00	19.05
7L	630	2.37	3.65	17.37
7M	640	1.65	2.54	12.09
7N	650	0.95	1.46	6.96
7O	660	1.37	2.11	10.04
8A	N/A	13.12	20.20	96.13
8B	510	1.13	1.74	8.28
8C	520	0.84	1.29	6.15
8D	530	1.06	1.63	7.77
8E	540	1.07	1.65	7.84
9A	N/A	0.50	0.77	3.66
9B	N/A	2.21	3.40	16.19
10A	N/A	5.70	8.78	41.77
10B	1110	1.93	2.97	14.14
10C	1120	2.37	3.65	17.37
10D	430	1.56	2.40	11.43
10E	420	1.42	2.19	10.40
10F	410	0.72	1.11	5.28

STREET FLOW CHECKS

Basin	Node	Q2	Q100
2A	133	1.54	7.33
2G	120	3.73	17.73
2H	110	2.06	9.82
3C	320	4.48	21.32
3D	310	1.79	8.50
4E	820	1.05	4.98
4F	810	1.06	5.06
5B	910	1.62	7.69
5C	920	1.43	6.81
5G	941	1.09	5.20
7B	710	1.29	6.15
7C	720	1.19	5.64
7G	741	1.34	6.37
7H	742	1.51	7.18
7I	1010	3.57	17.00
7J	1020	3.16	15.02
7K	620	4.00	19.05
7L	630	3.65	17.37
8B	510	1.74	8.28
8C	520	1.29	6.15
10B	1110	2.97	14.14
10C	1120	3.65	17.37
10E	420	2.19	10.40
10F	410	1.11	5.28

2 Year

Node	Q2	Street Slope	d	dmax	Comment
320	4.48	1.28	0.29	0.55	OK

* By inspection, all nodes are OK

100 Year

Location	Q100	Qpipe	Qstreet	S	Qmax	Comment
Approaching node 320	21.32	4.48	16.84	1.28	91.69	OK

* By inspection, all nodes are OK

INLET SIZING

Curb Inlets

Node	Q _{in}	Q _{max} (L=5')	Q _{max} (L=10')	Use L=
110	2.06	11	22	5
120	3.73	11	22	5
133	1.54	11	22	5
310	1.79	11	22	5
320	4.48	11	22	5
410	1.11	11	22	5
420	2.19	11	22	5
510	1.74	11	22	5
520	1.29	11	22	5
620	4.00	11	22	5
630	3.65	11	22	5
710	1.29	11	22	5
720	1.19	11	22	5
741	1.34	11	22	5
742	1.51	11	22	5
810	1.06	11	22	5
820	1.05	11	22	5
910	1.62	11	22	5
920	1.43	11	22	5
941	1.09	11	22	5
1010	3.57	11	22	5
1020	3.16	11	22	5
1110	2.97	11	22	5
1120	3.65	11	22	5

Area Inlets

Node	Q ₁₀₀	Size	Perimeter	Ponding Depth
121	9.67	2' x 2'	8	0.55
132	10.99	2' x 2'	8	0.59
140	11.14	2' x 2'	8	0.60
150	7.33	2' x 2'	8	0.45
160	15.31	2' x 2'	8	0.74
210	16.12	2' x 2'	8	0.77
330	11.72	2' x 2'	8	0.62
340	6.96	2' x 2'	8	0.44
430	11.43	2' x 2'	8	0.61
530	7.77	2' x 2'	8	0.47
540	7.84	2' x 2'	8	0.47
640	12.09	2' x 2'	8	0.63
650	6.96	2' x 2'	8	0.44
660	10.04	2' x 2'	8	0.56
730	8.50	2' x 2'	8	0.50
740	9.38	2' x 2'	8	0.53
750	10.48	2' x 2'	8	0.58

830	11.80	2' x 2'	8	0.62 -
831	9.82	2' x 2'	8	0.55
930	12.09	2' x 2'	8	0.63
950	7.84	2' x 2'	8	0.47
960	9.01	2' x 2'	8	0.52

Neenah R4826 2' x 2' Area Inlet

1.3 SF of open area

8 F Perimeter



S. TOPEKA • WICHITA, KANSAS 67202

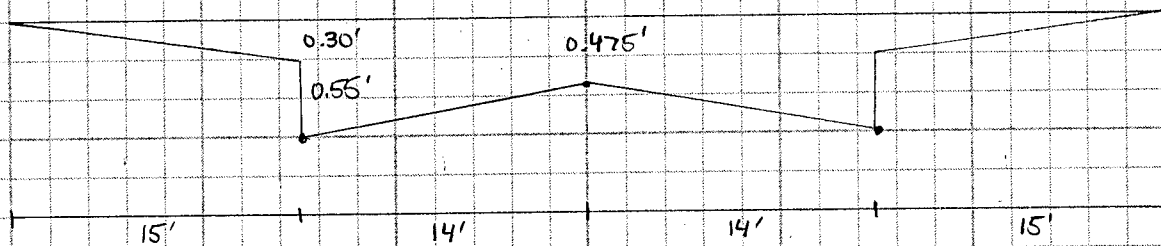
Project _____ Date _____

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Item _____ By _____

DETERMINE CAPACITIES OF STANDARD CURB STREET w/ 0.3' WALK
GRADE FOR 100-YR STORM ANALYSIS (58' ROW, 29 BK-BK)



$$n = \frac{(2 \times 14.5 \times 0.030) + (2 \times 3.05 \times 0.013) + (2 \times 12 \times 0.016)}{59.1} = 0.02256$$

$$(2 \times \frac{1}{2} \times 15 \times 0.30) + (28 \times 0.85) - (2 \times \frac{1}{2} \times 14 \times 0.375) = 23.05 \text{ SF}$$

$$p = 59.1 \text{ F}$$

$$R = \frac{A}{p} = \frac{23.05}{59.1} = 0.390$$

$$R^{2/3} = 0.534$$

$$Q = \frac{1.486}{n} AR^{2/3} S^{1/2}$$

$$Q = \left(\frac{1.486}{0.02256} \right) (23.05) (0.534) S^{1/2} = 810.47 S^{1/2}$$

Pond #1

Circular Pond Sizing with Elevations

Floor Area (Acres) 0.12
 Floor Elevation (ft) 160.00
 Static Pool Elevation (ft) 170.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft^2)	Area (Acres)	Storage (ft^3)	Storage (C.Y.)
	160.00	40.79	5227.20	0.12	0.00	0.00
	161.00	43.79	6024.36	0.14	5625.78	208.36
	162.00	46.79	6878.07	0.16	12105.27	448.34
	163.00	49.79	7788.32	0.18	19523.28	723.08
	164.00	52.79	8755.12	0.20	27964.65	1035.73
	165.00	55.79	9778.48	0.22	37514.19	1389.41
	166.00	58.79	10858.38	0.25	48256.74	1787.29
	167.00	61.79	11994.83	0.28	60277.10	2232.49
	168.00	64.79	13187.83	0.30	73660.11	2728.15
	169.00	67.79	14437.38	0.33	88490.59	3277.43
Static Pool	170.00	70.79	15743.47	0.36	104853.36	3883.46
	171.00	76.79	18525.31	0.43	130638.81	4838.47
	172.00	82.79	21533.34	0.49	160563.26	5946.79
	173.00	88.79	24767.57	0.57	194966.01	7220.96
	174.00	94.79	28227.99	0.65	234186.36	8673.57
	175.00	100.79	31914.61	0.73	278563.58	10317.17
	176.00	106.79	35827.42	0.82	328436.98	12164.33
	177.00	112.79	39966.43	0.92	384145.85	14227.62
	178.00	118.79	44331.63	1.02	446029.47	16519.61

Circular Pond Sizing with Elevations

Floor Area (Acres) 1.41
 Floor Elevation (ft) 156.00
 Static Pool Elevation (ft) 166.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft^2)	Area (Acres)	Storage (ft^3)	Storage (C.Y.)
	156.00	139.82	61419.60	1.41	0.00	0.00
	157.00	142.82	64083.48	1.47	62751.54	2324.13
	158.00	145.82	66803.90	1.53	128223.50	4749.02
	159.00	148.82	69580.87	1.60	196500.71	7277.80
	160.00	151.82	72414.39	1.66	267667.99	9913.63
	161.00	154.82	75304.46	1.73	341810.16	12659.64
	162.00	157.82	78251.08	1.80	419012.05	15518.96
	163.00	160.82	81254.25	1.87	499358.47	18494.76
	164.00	163.82	84313.97	1.94	582934.26	21590.16
	165.00	166.82	87430.23	2.01	669824.24	24808.31
Static Pool	166.00	169.82	90603.04	2.08	760113.22	28152.34
	167.00	175.82	97118.32	2.23	871958.54	32294.76
	168.00	181.82	103859.78	2.38	991676.31	36728.75
	169.00	187.82	110827.45	2.54	1119605.81	41466.88
	170.00	193.82	118021.30	2.71	1256086.33	46521.72
	171.00	199.82	125441.36	2.88	1401457.17	51905.82
	172.00	205.82	133087.60	3.06	1556057.61	57631.76
	173.00	211.82	140960.04	3.24	1720226.96	63712.11
	174.00	217.82	149058.68	3.42	1894304.50	70159.43

Circular Pond Sizing with Elevations

Floor Area (Acres) 1.10
 Floor Elevation (ft) 156.00
 Static Pool Elevation (ft) 166.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft ²)	Area (Acres)	Storage (ft ³)	Storage (C.Y.)
	156.00	123.50	47916.00	1.10	0.00	0.00
	157.00	126.50	50272.19	1.15	49094.09	1818.30
	158.00	129.50	52684.92	1.21	100600.92	3725.96
	159.00	132.50	55154.20	1.27	154605.31	5726.12
	160.00	135.50	57680.04	1.32	211192.07	7821.93
	161.00	138.50	60262.42	1.38	270446.04	10016.52
	162.00	141.50	62901.34	1.44	332452.03	12313.04
	163.00	144.50	65596.82	1.51	397294.88	14714.63
	164.00	147.50	68348.85	1.57	465059.40	17224.42
	165.00	150.50	71157.42	1.63	535830.41	19845.57
Static Pool	166.00	153.50	74022.55	1.70	609692.74	22581.21
	167.00	159.50	79922.44	1.83	703111.43	26041.16
	168.00	165.50	86048.53	1.98	803787.18	29769.90
	169.00	171.50	92400.81	2.12	912059.29	33779.97
	170.00	177.50	98979.29	2.27	1028267.04	38083.96
	171.00	183.50	105783.96	2.43	1152749.73	42694.43
	172.00	189.50	112814.83	2.59	1285846.64	47623.95
	173.00	195.50	120071.89	2.76	1427897.08	52885.08
	174.00	201.50	127555.15	2.93	1579240.34	58490.38

Pond #4

Circular Pond Sizing with Elevations

Floor Area (Acres) 2.23
 Floor Elevation (ft) 156.00
 Static Pool Elevation (ft) 166.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft^2)	Area (Acres)	Storage (ft^3)	Storage (C.Y.)
	156.00	175.84	97138.80	2.23	0.00	0.00
	157.00	178.84	100481.61	2.31	98810.20	3659.64
	158.00	181.84	103880.97	2.38	201019.77	7445.18
	159.00	184.84	107336.87	2.46	306713.51	11359.76
	160.00	187.84	110849.33	2.54	415976.26	15406.53
	161.00	190.84	114418.33	2.63	528892.83	19588.62
	162.00	193.84	118043.88	2.71	645548.05	23909.19
	163.00	196.84	121725.98	2.79	766026.75	28371.36
	164.00	199.84	125464.63	2.88	890413.74	32978.29
	165.00	202.84	129259.83	2.97	1018793.85	37733.11
Static Pool	166.00	205.84	133111.58	3.06	1151251.90	42638.96
	167.00	211.84	140984.72	3.24	1309679.35	48506.64
	168.00	217.84	149084.05	3.42	1477337.12	54716.19
	169.00	223.84	157409.58	3.61	1654564.49	61280.17
	170.00	229.84	165961.31	3.81	1841700.75	68211.14
	171.00	235.84	174739.23	4.01	2039085.19	75521.67
	172.00	241.84	183743.34	4.22	2247057.11	83224.34
	173.00	247.84	192973.65	4.43	2465955.79	91331.70
	174.00	253.84	202430.15	4.65	2696120.54	99856.32

Pond #5

Circular Pond Sizing with Elevations

Floor Area (Acres) 1.90
 Floor Elevation (ft) 157.00
 Static Pool Elevation (ft) 167.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft^2)	Area (Acres)	Storage (ft^3)	Storage (C.Y.)
	157.00	162.31	82764.00	1.90	0.00	0.00
	158.00	165.31	85851.75	1.97	84307.87	3122.51
	159.00	168.31	88996.05	2.04	171760.05	6361.48
	160.00	171.31	92196.89	2.12	262441.34	9720.05
	161.00	174.31	95454.29	2.19	356436.58	13201.35
	162.00	177.31	98768.23	2.27	453830.58	16808.54
	163.00	180.31	102138.73	2.34	554708.18	20544.75
	164.00	183.31	105565.77	2.42	659154.19	24413.12
	165.00	186.31	109049.36	2.50	767253.43	28416.79
	166.00	189.31	112589.50	2.58	879090.74	32558.92
Static Pool	167.00	192.31	116186.18	2.67	994750.92	36842.63
	168.00	198.31	123549.21	2.84	1134722.63	42026.76
	169.00	204.31	131138.42	3.01	1283414.52	47533.87
	170.00	210.31	138953.83	3.19	1441165.90	53376.51
	171.00	216.31	146995.44	3.37	1608316.05	59567.26
	172.00	222.31	155263.24	3.56	1785204.27	66118.68
	173.00	228.31	163757.23	3.76	1972169.84	73043.33
	174.00	234.31	172477.42	3.96	2169552.06	80353.78
	175.00	240.31	181423.80	4.16	2377690.22	88062.60

Circular Pond Sizing with Elevations

Floor Area (Acres) 1.22
 Floor Elevation (ft) 160.00
 Static Pool Elevation (ft) 170.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft ²)	Area (Acres)	Storage (ft ³)	Storage (C.Y.)
	160.00	130.06	53143.20	1.22	0.00	0.00
	161.00	133.06	55623.08	1.28	54383.14	2014.19
	162.00	136.06	58159.50	1.34	111302.70	4122.32
	163.00	139.06	60752.48	1.39	170843.51	6327.54
	164.00	142.06	63402.00	1.46	233090.40	8632.98
	165.00	145.06	66108.07	1.52	298128.18	11041.78
	166.00	148.06	68870.69	1.58	366041.67	13557.10
	167.00	151.06	71689.86	1.65	436915.71	16182.06
	168.00	154.06	74565.58	1.71	510835.11	18919.82
	169.00	157.06	77497.84	1.78	587884.69	21773.51
Static Pool	170.00	160.06	80486.66	1.85	668149.29	24746.27
	171.00	166.06	86633.93	1.99	768774.23	28473.12
	172.00	172.06	93007.40	2.14	876903.62	32477.91
	173.00	178.06	99607.07	2.29	992876.74	36773.21
	174.00	184.06	106432.93	2.44	1117032.89	41371.59
	175.00	190.06	113484.98	2.61	1249711.36	46285.61
	176.00	196.06	120763.23	2.77	1391251.44	51527.83
	177.00	202.06	128267.67	2.94	1541992.43	57110.83
	178.00	208.06	135998.31	3.12	1702273.61	63047.17

Circular Pond Sizing with Elevations

Floor Area (Acres) 1.80
 Floor Elevation (ft) 160.00
 Static Pool Elevation (ft) 170.00
 Side Slopes to Static (_ :1) 3
 Side Slopes beyond Static (_ :1) 6

	Elevation (ft)	Radius (ft)	Area (ft^2)	Area (Acres)	Storage (ft^3)	Storage (C.Y.)
	160.00	157.98	78408.00	1.80	0.00	0.00
	161.00	160.98	81414.15	1.87	79911.07	2959.67
	162.00	163.98	84476.85	1.94	162884.85	6032.77
	163.00	166.98	87596.09	2.01	249006.14	9222.45
	164.00	169.98	90771.89	2.08	338359.77	12531.84
	165.00	172.98	94004.23	2.16	431030.58	15964.10
	166.00	175.98	97293.12	2.23	527103.37	19522.35
	167.00	178.98	100638.56	2.31	626662.97	23209.74
	168.00	181.98	104040.55	2.39	729794.21	27029.42
	169.00	184.98	107499.09	2.47	836581.91	30984.52
Static Pool	170.00	187.98	111014.18	2.55	947110.89	35078.18
	171.00	193.98	118214.00	2.71	1081420.98	40052.63
	172.00	199.98	125640.01	2.88	1224288.07	45344.00
	173.00	205.98	133292.22	3.06	1376051.43	50964.87
	174.00	211.98	141170.62	3.24	1537050.36	56927.79
	175.00	217.98	149275.22	3.43	1707624.16	63245.34
	176.00	223.98	157606.01	3.62	1888112.11	69930.08
	177.00	229.98	166163.00	3.81	2078853.51	76994.57
	178.00	235.98	174946.18	4.02	2280187.65	84451.39

Pond #1

Outlet

32.0 Maximum Q (cfs)
 15.000 Weir Width (feet)
 170.00 Weir Elevation

<u>Q</u> <u>(cfs)</u>	<u>Weir</u> <u>Width</u> <u>(feet)</u>	<u>Weir</u> <u>Elevation</u>	<u>q</u>	<u>Critical</u> <u>Depth</u> <u>(feet)</u>	<u>Energy</u> <u>Head</u> <u>(feet)</u>	<u>Water</u> <u>Surface</u> <u>Elevation</u>
0.0	15.000	170.00	0.0	0.00	0.00	170.00
3.2	15.000	170.00	0.2	0.11	0.17	170.17
6.4	15.000	170.00	0.4	0.18	0.27	170.27
9.6	15.000	170.00	0.6	0.23	0.35	170.35
12.8	15.000	170.00	0.9	0.28	0.42	170.42
16.0	15.000	170.00	1.1	0.33	0.49	170.49
19.2	15.000	170.00	1.3	0.37	0.56	170.56
22.4	15.000	170.00	1.5	0.41	0.62	170.62
25.6	15.000	170.00	1.7	0.45	0.67	170.67
28.8	15.000	170.00	1.9	0.49	0.73	170.73
32.0	15.000	170.00	2.1	0.52	0.78	170.78

Pond #2

Outlet

269.0 Maximum Q (cfs)

25.000 Weir Width (feet)

166.00 Weir Elevation

<u>Q</u> <u>(cfs)</u>	<u>Weir</u> <u>Width</u> <u>(feet)</u>	<u>Weir</u> <u>Elevation</u>	<u>q</u>	<u>Critical</u> <u>Depth</u> <u>(feet)</u>	<u>Energy</u> <u>Head</u> <u>(feet)</u>	<u>Water</u> <u>Surface</u> <u>Elevation</u>
0.0	25.000	166.00	0.0	0.00	0.00	166.00
26.9	25.000	166.00	1.1	0.33	0.50	166.50
53.8	25.000	166.00	2.2	0.52	0.79	166.79
80.7	25.000	166.00	3.2	0.69	1.03	167.03
107.6	25.000	166.00	4.3	0.83	1.25	167.25
134.5	25.000	166.00	5.4	0.97	1.45	167.45
161.4	25.000	166.00	6.5	1.09	1.63	167.63
188.3	25.000	166.00	7.5	1.21	1.81	167.81
215.2	25.000	166.00	8.6	1.32	1.98	167.98
242.1	25.000	166.00	9.7	1.43	2.14	168.14
269.0	25.000	166.00	10.8	1.53	2.30	168.30

Pond #5

Outlet

63.0 Maximum Q (cfs)

5.000 Weir Width (feet)

167.00 Weir Elevation

<u>Q</u> <u>(cfs)</u>	<u>Weir</u> <u>Width</u> <u>(feet)</u>	<u>Weir</u> <u>Elevation</u>	<u>q</u>	<u>Critical</u> <u>Depth</u> <u>(feet)</u>	<u>Energy</u> <u>Head</u> <u>(feet)</u>	<u>Water</u> <u>Surface</u> <u>Elevation</u>
0.0	5.000	167.00	0.0	0.00	0.00	167.00
6.3	5.000	167.00	1.3	0.37	0.55	167.55
12.6	5.000	167.00	2.5	0.58	0.87	167.87
18.9	5.000	167.00	3.8	0.76	1.14	168.14
25.2	5.000	167.00	5.0	0.92	1.39	168.39
31.5	5.000	167.00	6.3	1.07	1.61	168.61
37.8	5.000	167.00	7.6	1.21	1.82	168.82
44.1	5.000	167.00	8.8	1.34	2.01	169.01
50.4	5.000	167.00	10.1	1.47	2.20	169.20
56.7	5.000	167.00	11.3	1.59	2.38	169.38
63.0	5.000	167.00	12.6	1.70	2.55	169.55

PRINT DATE: 03-03-2004
 PRINT TIME: 15:10:13

FILE DATE: 03-03-2004
 FILE NAME: PRACTICE

FHWA CULVERT ANALYSIS
 HY-8, VERSION 6.1

C U L V N O.	SITE DATA			CULVERT SHAPE, MATERIAL, INLET				
	INLET ELEV. (ft)	OUTLET ELEV. (ft)	CULVERT LENGTH (ft)	BARRELS SHAPE MATERIAL	SPAN (ft)	RISE (ft)	MANNING n	INLET TYPE
1	170.00	163.00	100.24	1 RCP	1.50	1.50	.012	CONVENTIONAL
2								
3								
4								
5								
6								

SUMMARY OF CULVERT FLOWS (cfs)

FILE: PRACTICE

DATE: 03-03-2004

ELEV (ft)	TOTAL	1	2	3	4	5	6	ROADWAY	ITR
170.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
170.72	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
171.11	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
171.42	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
171.77	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
172.21	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
172.75	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
173.40	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
174.14	17.6	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
174.98	19.8	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
175.91	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	0
0.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	OVERTOPPING	

SUMMARY OF ITERATIVE SOLUTION ERRORS

FILE: PRACTICE

DATE: 03-03-2004

HEAD ELEV (ft)	HEAD ERROR (ft)	TOTAL FLOW (cfs)	FLOW ERROR (cfs)	% FLOW ERROR
170.00	0.000	0.00	0.00	0.00
170.72	0.000	2.20	0.00	0.00
171.11	0.000	4.40	0.00	0.00
171.42	0.000	6.60	0.00	0.00
171.77	0.000	8.80	0.00	0.00
172.21	0.000	11.00	0.00	0.00
172.75	0.000	13.20	0.00	0.00
173.40	0.000	15.40	0.00	0.00
174.14	0.000	17.60	0.00	0.00
174.98	0.000	19.80	0.00	0.00
175.91	0.000	22.00	0.00	0.00

<1> TOLERANCE (ft) = 0.010

<2> TOLERANCE (%) = 1.000

DATE: 03-03-2004
CURRENT TIME: 15:10:13

FILE DATE: 03-03-2004
FILE NAME: PRACTICE

PERFORMANCE CURVE FOR CULVERT 1 - 1(1.50 (ft) BY 1.50 (ft)) RCP

DIS- CHARGE FLOW (cfs)	HEAD- WATER ELEV. (ft)	INLET CONTROL DEPTH (ft)	OUTLET CONTROL DEPTH (ft)	FLOW NORMAL TYPE <F4>	DEPTH (ft)	CRIT. DEPTH (ft)	OUTLET DEPTH (ft)	TW DEPTH (ft)	OUTLET VEL. (fps)	TW VEL. (fps)
0.00	170.00	0.00	0.00	0-NF	0.00	0.00	0.00	4.00	0.00	0.00
2.20	170.72	0.72	0.72	1-S1f	0.27	0.56	0.70	4.00	2.72	0.00
4.40	171.11	1.11	1.11	1-S1f	0.38	0.80	1.00	4.00	3.52	0.00
6.60	171.42	1.42	1.42	1-S1f	0.47	0.99	1.10	4.00	4.74	0.00
8.80	171.77	1.77	1.77	1-S1f	0.55	1.14	1.30	4.00	5.43	0.00
11.00	172.21	2.21	2.21	1-S1f	0.63	1.26	1.40	4.00	6.45	0.00
13.20	172.75	2.75	2.75	1-S1f	0.69	1.36	1.50	4.00	7.47	0.00
15.40	173.40	3.40	3.40	1-S1f	0.76	1.46	1.50	4.00	8.71	0.00
17.60	174.14	4.14	1.22	4-S2n	0.82	1.50	0.85	4.00	17.04	0.00
19.80	174.98	4.98	2.34	4-S2n	0.89	1.50	0.92	4.00	17.42	0.00
22.00	175.91	5.91	3.60	4-S2n	0.95	1.50	0.90	4.00	19.87	0.00

El. inlet face invert 170.00 ft El. outlet invert 163.00 ft
El. inlet throat invert 0.00 ft El. inlet crest 0.00 ft

*** SITE DATA ***** CULVERT INVERT *****

INLET STATION 0.00 ft
INLET ELEVATION 170.00 ft
OUTLET STATION 100.00 ft
OUTLET ELEVATION 163.00 ft
NUMBER OF BARRELS 1
SLOPE (V/H) 0.0700
CULVERT LENGTH ALONG SLOPE 100.24 ft

***** CULVERT DATA SUMMARY *****

BARREL SHAPE CIRCULAR
BARREL DIAMETER 1.50 ft
BARREL MATERIAL CONCRETE
BARREL MANNING'S n 0.012
INLET TYPE CONVENTIONAL
INLET EDGE AND WALL GROOVED END PROJECTION
INLET DEPRESSION NONE

NT DATE: 03-03-2004
CURRENT TIME: 15:10:13

FILE DATE: 03-03-2004
FILE NAME: PRACTICE

TAILWATER

CONSTANT WATER SURFACE ELEVATION
167.00

ROADWAY OVERTOPPING DATA

ROADWAY SURFACE	PAVED
EMBANKMENT TOP WIDTH	35.00 ft
CREST LENGTH	50.00 ft
OVERTOPPING CREST ELEVATION	172.55 ft

Pond #7
outlet

32.0 Maximum Q (cfs)
5.000 Weir Width (feet)
171.00 Weir Elevation

<u>Q</u> <u>(cfs)</u>	<u>Weir</u> <u>Width</u> <u>(feet)</u>	<u>Weir</u> <u>Elevation</u>	<u>q</u>	<u>Critical</u> <u>Depth</u> <u>(feet)</u>	<u>Energy</u> <u>Head</u> <u>(feet)</u>	<u>Water</u> <u>Surface</u> <u>Elevation</u>
0.0	5.000	171.00	0.0	0.00	0.00	171.00
3.2	5.000	171.00	0.6	0.23	0.35	171.35
6.4	5.000	171.00	1.3	0.37	0.56	171.56
9.6	5.000	171.00	1.9	0.49	0.73	171.73
12.8	5.000	171.00	2.6	0.59	0.88	171.88
16.0	5.000	171.00	3.2	0.68	1.02	172.02
19.2	5.000	171.00	3.8	0.77	1.16	172.16
22.4	5.000	171.00	4.5	0.85	1.28	172.28
25.6	5.000	171.00	5.1	0.93	1.40	172.40
28.8	5.000	171.00	5.8	1.01	1.52	172.52
32.0	5.000	171.00	6.4	1.08	1.63	172.63

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*****
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* FLOOD HYDROGRAPH PACKAGE (HEC-1)
*   JUN 1998
*   VERSION 4.1
*
* RUN DATE 13MAR04 TIME 11:56:43
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*
* U.S. ARMY CORPS OF ENGINEERS
* HYDROLOGIC ENGINEERING CENTER
* 609 SECOND STREET
* DAVIS, CALIFORNIA 95616
* (916) 756-1104
*
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X  X  XXXXXX  XXXX  X
X  X  X      X  X  XX
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THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE. THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY, DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL LOSS RATE:GREEN AND AMPT INFILTRATION KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

HEC-1 INPUT

PAGE 1

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

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1 ID FONTANA
2 ID DEVELOPED CONDITIONS
3 ID BY BLB DATE 03-13-04

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*** LIST ***
*** FREE ***

*DIAGRAM

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4 IT 15 01JAN04 1200 0 02JAN04 2000
5 IN 15 01JAN04 1200
6 IO 0 5
7 JR PREC 7.8
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*
*
8 KK BSN5
9 BA 0.023
10 PB 1.00
11 PC 0.000 0.003 0.006 0.008 0.011 0.014 0.017 0.019 0.022 0.025
12 PC 0.029 0.032 0.035 0.038 0.042 0.045 0.048 0.052 0.056 0.060
13 PC 0.064 0.068 0.072 0.076 0.080 0.085 0.090 0.095 0.100 0.105
14 PC 0.110 0.115 0.120 0.127 0.134 0.140 0.147 0.155 0.163 0.172
15 PC 0.181 0.193 0.204 0.220 0.235 0.259 0.283 0.387 0.663 0.699

```



1

PAGE 2

57	BA	0.055									
58	PB	1.00									
59	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
60	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
61	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
62	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
63	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
64	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
65	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
66	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
67	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
68	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
69	LS	0	68	10							
70	UD	0.840									

*
*

71	KK	7PD6									
72	HC	2	0								

*
*

73	KK	POND5									
74	RS	1	ELEV	159.0							
75	SA	2.67	2.84	3.01	3.19						
76	SE	167.0	168.0	169.0	170.0						
77	SQ	0	6.3	12.6	18.9	25.2	31.5	37.8	44.1	50.4	56.7
78	SQ	63.0									
79	SE	167.0	167.55	167.87	168.14	168.39	168.61	168.82	169.01	169.20	169.38
80	SE	169.6									

*
*

HEC-1 INPUT

PAGE 3

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
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81	KK	BSN6									
82	BA	0.008									
83	PB	1.00									
84	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
85	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
86	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
87	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
88	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
89	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
90	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
91	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
92	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
93	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
94	LS	0	68	10							
95	UD	0.530									

*
*

96	KK	RTE6									
97	KO	5									
98	RT	0	0	3							

*
*

99	KK	OFFST									
100	BA	0.359									
101	PB	1.00									
102	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
103	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
104	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
105	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
106	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
107	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
108	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
109	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
110	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
111	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
112	LS	0	70	10							
113	UD	1.575									
	*										
	*										

114	KK	BSN8									
115	BA	0.027									
116	PB	1.00									
117	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
118	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
119	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
120	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
121	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
122	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
123	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
124	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
125	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979

HEC-1 INPUT

PAGE 4

LINE	ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10
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126	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
127	LS	0	68	10							
128	UD	0.490									
	*										
	*										

129	KK	608P5									
130	HC	4	0								
	*										
	*										

131	KK	POND4									
132	RS	1	ELEV	158.0							
133	SA	3.06	3.24	3.42	3.61						
134	SE	166.0	167.0	168.0	169.0						
135	SL	158.0	14.73	0.6	0.5						
136	SS	167.0	0.00	3.0	1.5						
	*										
	*										

137	KK	BSN10									
138	BA	0.021									
139	PB	1.00									
140	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
141	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060

142	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
143	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
144	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
145	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
146	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
147	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
148	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
149	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
150	LS	0	68	10							
151	UD	0.670									
	*										
	*										
152	KK	10PD4									
153	HC	2	0								
	*										
	*										
154	KK	POND3									
155	RS	1	ELEV	162.0							
156	SA	1.70	1.83	1.98	2.12						
157	SE	166.0	167.0	168.0	169.0						
158	SL	158.5	14.73	0.6	0.5						
159	SS	168.0	0.00	3.0	1.5						
	*										
	*										

HEC-1 INPUT

PAGE 5

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

160	KK	BSN3									
161	BA	0.024									
162	PB	1.00									
163	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
164	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
165	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
166	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
167	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
168	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
169	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
170	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947
171	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
172	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
173	LS	0	68	10							
174	UD	0.580									
	*										
	*										
175	KK	BSN2									
176	BA	0.025									
177	PB	1.00									
178	PC	0.000	0.003	0.006	0.008	0.011	0.014	0.017	0.019	0.022	0.025
179	PC	0.029	0.032	0.035	0.038	0.042	0.045	0.048	0.052	0.056	0.060
180	PC	0.064	0.068	0.072	0.076	0.080	0.085	0.090	0.095	0.100	0.105
181	PC	0.110	0.115	0.120	0.127	0.134	0.140	0.147	0.155	0.163	0.172
182	PC	0.181	0.193	0.204	0.220	0.235	0.259	0.283	0.387	0.663	0.699
183	PC	0.735	0.754	0.772	0.786	0.799	0.810	0.820	0.828	0.835	0.843
184	PC	0.850	0.858	0.865	0.873	0.880	0.885	0.889	0.894	0.898	0.903
185	PC	0.907	0.912	0.916	0.921	0.925	0.929	0.934	0.938	0.943	0.947

186	PC	0.952	0.955	0.958	0.961	0.964	0.967	0.970	0.973	0.976	0.979
187	PC	0.982	0.985	0.988	0.991	0.994	0.997	1.000			
188	LS	0	68	10							
189	UD	0.670									

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*

190	KK	POND1									
191	RS	1	ELEV	162.0							
192	SA	0.36	0.43	0.49	0.57						
193	SE	170.0	171.0	172.0	173.0						
194	SQ	0	3.2	6.4	9.6	12.8	16.0	19.2	22.4	25.6	28.8
195	SQ	32.0									
196	SE	170.0	170.17	170.27	170.35	170.42	170.49	170.56	170.62	170.67	170.73
197	SE	170.8									

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198	KK	3PD1&3		
199	HC	3	0	

*
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HEC-1 INPUT

PAGE 6

LINE ID.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

200	KK	POND2									
201	RS	1	ELEV	158.0							
202	SA	2.08	2.23	2.38	2.54						
203	SE	166.0	167.0	168.0	169.0						
204	SQ	0	26.9	53.8	80.7	107.6	134.5	161.4	188.3	215.2	242.1
205	SQ	269.0									
206	SE	166.0	166.50	166.79	167.03	167.25	167.45	167.63	167.81	167.98	168.14
207	SE	168.3									

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208 ZZ

SCHEMATIC DIAGRAM OF STREAM NETWORK

INPUT

LINE (V) ROUTING (--->) DIVERSION OR PUMP FLOW

NO. (.) CONNECTOR (<---) RETURN OF DIVERTED OR PUMPED FLOW

8	BSN5	
	V	
	V	
23	POND7	
	.	
	.	
31	BSN4	
	.	
	.	
46	PD7&4.....	
	V	
	V	
48	POND6	

56	.	BSN7	.
	.	.	.
	.	.	.
71	7PD6.....		
	V		
	V		
73	POND5		
	.		
81	.	BSN6	.
	.	V	.
	.	V	.
96	.	RTE6	.
	.	.	.
99	.	OFFST	.
	.	.	.
114	.	.	BSN8
	.	.	.
	.	.	.
129	608P5.....		
	V		
	V		
131	POND4		
	.		
	.	BSN10	.
	.	.	.
	.	.	.
152	10PD4.....		
	V		
	V		
154	POND3		
	.		
160	.	BSN3	.
	.	.	.
175	.	BSN2	.
	.	V	.
	.	V	.
190	.	POND1	.
	.	.	.
	.	.	.
198	3PD1&3.....		
	V		
	V		
200	POND2		

(***) RUNOFF ALSO COMPUTED AT THIS LOCATION

 * FLOOD HYDROGRAPH PACKAGE (HEC-1) *
 * JUN 1998 *
 * VERSION 4.1 *
 * *
 * RUN DATE 13MAR04 TIME 11:56:43 *

 * *
 * U.S. ARMY CORPS OF ENGINEERS *
 * HYDROLOGIC ENGINEERING CENTER *
 * 609 SECOND STREET *
 * DAVIS, CALIFORNIA 95616 *
 * (916) 756-1104 *

*

*

FONTANA
DEVELOPED CONDITIONS
BY BLB DATE 03-13-04

6 IO OUTPUT CONTROL VARIABLES

IPRNT 0 PRINT CONTROL
IPLOT 5 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

IT HYDROGRAPH TIME DATA

NMIN 15 MINUTES IN COMPUTATION INTERVAL
IDATE 1JAN 4 STARTING DATE
ITIME 1200 STARTING TIME
NQ 129 NUMBER OF HYDROGRAPH ORDINATES
NDDATE 2JAN 4 ENDING DATE
NDTIME 2000 ENDING TIME
ICENT 19 CENTURY MARK

COMPUTATION INTERVAL .25 HOURS
TOTAL TIME BASE 32.00 HOURS

ENGLISH UNITS

DRAINAGE AREA SQUARE MILES
PRECIPITATION DEPTH INCHES
LENGTH, ELEVATION FEET
FLOW CUBIC FEET PER SECOND
STORAGE VOLUME ACRE-FEET
SURFACE AREA ACRES
TEMPERATURE DEGREES FAHRENHEIT

JP MULTI-PLAN OPTION

NPLAN 1 NUMBER OF PLANS

JR MULTI-RATIO OPTION

RATIOS OF PRECIPITATION
7.80

*** **

8 KK

*
*
* BSN5 *
*

IN

TIME DATA FOR INPUT TIME SERIES

JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

9 BA

SUBBASIN CHARACTERISTICS

TAREA .02 SUBBASIN AREA

PRECIPITATION DATA

10 PB STORM 1.00 BASIN TOTAL PRECIPITATION

11 PI INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

21 LS SCS LOSS RATE

STRTL .94 INITIAL ABSTRACTION

CRVNBR 68.00 CURVE NUMBER

RTIMP 10.00 PERCENT IMPERVIOUS AREA

22 UD SCS DIMENSIONLESS UNITGRAPH

TLAG .60 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH

14 END-OF-PERIOD ORDINATES

4.	12.	15.	12.	7.	4.	2.	1.	1.	0.
0.	0.	0.	0.						

HYDROGRAPH AT STATION BSN5

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	0.

1 JAN 1530	15	.00	.00	.00	0.	*	2 JAN 0745	80	.00	.00	.00	0.
1 JAN 1545	16	.00	.00	.00	0.	*	2 JAN 0800	81	.00	.00	.00	0.
1 JAN 1600	17	.00	.00	.00	0.	*	2 JAN 0815	82	.00	.00	.00	0.
1 JAN 1615	18	.00	.00	.00	0.	*	2 JAN 0830	83	.00	.00	.00	0.
1 JAN 1630	19	.00	.00	.00	0.	*	2 JAN 0845	84	.00	.00	.00	0.
1 JAN 1645	20	.00	.00	.00	0.	*	2 JAN 0900	85	.00	.00	.00	0.
1 JAN 1700	21	.00	.00	.00	0.	*	2 JAN 0915	86	.00	.00	.00	0.
1 JAN 1715	22	.00	.00	.00	0.	*	2 JAN 0930	87	.00	.00	.00	0.
1 JAN 1730	23	.00	.00	.00	0.	*	2 JAN 0945	88	.00	.00	.00	0.
1 JAN 1745	24	.00	.00	.00	0.	*	2 JAN 1000	89	.00	.00	.00	0.
1 JAN 1800	25	.00	.00	.00	0.	*	2 JAN 1015	90	.00	.00	.00	0.
1 JAN 1815	26	.01	.00	.00	0.	*	2 JAN 1030	91	.00	.00	.00	0.
1 JAN 1830	27	.01	.00	.00	0.	*	2 JAN 1045	92	.00	.00	.00	0.
1 JAN 1845	28	.00	.00	.00	0.	*	2 JAN 1100	93	.00	.00	.00	0.
1 JAN 1900	29	.01	.00	.00	0.	*	2 JAN 1115	94	.00	.00	.00	0.
1 JAN 1915	30	.00	.00	.00	0.	*	2 JAN 1130	95	.00	.00	.00	0.
1 JAN 1930	31	.01	.00	.00	0.	*	2 JAN 1145	96	.00	.00	.00	0.
1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	0.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	1.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	1.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	0.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)	(HR)	(CFS)		

+	1.	12.50	0.	0.	0.	0.
		(INCHES)	.070	.100	.101	.101
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .02 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN5
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.04	.01	.03	3.
1	JAN	1215	2	.02	.02	.00	0.	*	2	JAN	0430	67	.03	.01	.03	3.
1	JAN	1230	3	.02	.02	.00	0.	*	2	JAN	0445	68	.04	.01	.03	2.
1	JAN	1245	4	.02	.01	.00	0.	*	2	JAN	0500	69	.03	.01	.03	2.
1	JAN	1300	5	.02	.02	.00	0.	*	2	JAN	0515	70	.04	.01	.03	2.
1	JAN	1315	6	.02	.02	.00	0.	*	2	JAN	0530	71	.03	.01	.03	2.
1	JAN	1330	7	.02	.02	.00	0.	*	2	JAN	0545	72	.04	.01	.03	2.
1	JAN	1345	8	.02	.01	.00	0.	*	2	JAN	0600	73	.03	.01	.03	2.
1	JAN	1400	9	.02	.02	.00	0.	*	2	JAN	0615	74	.04	.01	.03	2.
1	JAN	1415	10	.02	.02	.00	0.	*	2	JAN	0630	75	.03	.01	.03	2.
1	JAN	1430	11	.03	.03	.00	0.	*	2	JAN	0645	76	.03	.01	.03	2.
1	JAN	1445	12	.02	.02	.00	0.	*	2	JAN	0700	77	.04	.01	.03	2.
1	JAN	1500	13	.02	.02	.00	0.	*	2	JAN	0715	78	.03	.01	.03	2.
1	JAN	1515	14	.02	.02	.00	0.	*	2	JAN	0730	79	.04	.01	.03	2.
1	JAN	1530	15	.03	.03	.00	0.	*	2	JAN	0745	80	.03	.01	.03	2.
1	JAN	1545	16	.02	.02	.00	0.	*	2	JAN	0800	81	.04	.01	.03	2.
1	JAN	1600	17	.02	.02	.00	0.	*	2	JAN	0815	82	.02	.00	.02	2.
1	JAN	1615	18	.03	.03	.00	0.	*	2	JAN	0830	83	.02	.00	.02	2.
1	JAN	1630	19	.03	.03	.00	0.	*	2	JAN	0845	84	.02	.00	.02	1.
1	JAN	1645	20	.03	.03	.00	0.	*	2	JAN	0900	85	.02	.00	.02	1.
1	JAN	1700	21	.03	.03	.00	0.	*	2	JAN	0915	86	.02	.00	.02	1.
1	JAN	1715	22	.03	.03	.00	0.	*	2	JAN	0930	87	.02	.00	.02	1.
1	JAN	1730	23	.03	.03	.00	0.	*	2	JAN	0945	88	.02	.00	.02	1.
1	JAN	1745	24	.03	.03	.00	0.	*	2	JAN	1000	89	.02	.00	.02	1.
1	JAN	1800	25	.03	.03	.00	0.	*	2	JAN	1015	90	.02	.00	.02	1.
1	JAN	1815	26	.04	.04	.00	0.	*	2	JAN	1030	91	.02	.00	.02	1.
1	JAN	1830	27	.04	.04	.00	0.	*	2	JAN	1045	92	.02	.00	.02	1.
1	JAN	1845	28	.04	.04	.00	0.	*	2	JAN	1100	93	.02	.00	.02	1.
1	JAN	1900	29	.04	.04	.00	0.	*	2	JAN	1115	94	.02	.00	.02	1.
1	JAN	1915	30	.04	.04	.00	0.	*	2	JAN	1130	95	.02	.00	.02	1.
1	JAN	1930	31	.04	.04	.00	0.	*	2	JAN	1145	96	.02	.00	.02	1.
1	JAN	1945	32	.04	.04	.00	0.	*	2	JAN	1200	97	.02	.00	.02	1.
1	JAN	2000	33	.04	.04	.00	0.	*	2	JAN	1215	98	.00	.00	.00	1.
1	JAN	2015	34	.05	.05	.01	0.	*	2	JAN	1230	99	.00	.00	.00	1.
1	JAN	2030	35	.05	.05	.01	0.	*	2	JAN	1245	100	.00	.00	.00	1.
1	JAN	2045	36	.05	.04	.01	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.05	.05	.01	0.	*	2	JAN	1315	102	.00	.00	.00	0.
1	JAN	2115	38	.06	.05	.01	0.	*	2	JAN	1330	103	.00	.00	.00	0.
1	JAN	2130	39	.06	.05	.01	1.	*	2	JAN	1345	104	.00	.00	.00	0.
1	JAN	2145	40	.07	.05	.02	1.	*	2	JAN	1400	105	.00	.00	.00	0.
1	JAN	2200	41	.07	.05	.02	1.	*	2	JAN	1415	106	.00	.00	.00	0.
1	JAN	2215	42	.09	.07	.03	1.	*	2	JAN	1430	107	.00	.00	.00	0.

1 JAN 2230	43	.09	.06	.03	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	1.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	2.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	2.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	3.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	5.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	13.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	27.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	32.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	27.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	20.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	14.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	11.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	8.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	7.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	5.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	5.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	4.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	3.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	3.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	3.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	3.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	3.	*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
32.	12.50	9.	3.	2.	2.
	(INCHES)	3.467	4.432	4.441	4.441
	(AC-FT)	4.	5.	5.	5.

CUMULATIVE AREA = .02 SQ MI

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23 KK * POND7 *
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HYDROGRAPH ROUTING DATA

24 RS STORAGE ROUTING

NSTPS	1	NUMBER OF SUBREACHES
ITYP	ELEV	TYPE OF INITIAL CONDITION
RSVRIC	162.00	INITIAL CONDITION
X	.00	WORKING R AND D COEFFICIENT

25 SA	AREA	2.5	2.7	2.9	3.1
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26 SE	ELEVATION	171.00	172.00	173.00	174.00						
27 SQ	DISCHARGE	0.	3.	6.	10.	13.	16.	19.	22.	26.	29.
		32.									
29 SE	ELEVATION	171.00	171.35	171.56	171.73	171.88	172.02	172.16	172.28	172.40	172.52
		172.60									

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	2.63	5.42	8.39
ELEVATION	171.00	172.00	173.00	174.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	.90	1.45	1.90	2.31	2.63	2.68	3.07	3.39	3.73
OUTFLOW	.00	3.20	6.40	9.60	12.80	15.54	16.00	19.20	22.40	25.60
ELEVATION	171.00	171.35	171.56	171.73	171.88	172.00	172.02	172.16	172.28	172.40

STORAGE	4.06	4.29	5.42	8.39
OUTFLOW	28.80	32.00	48.00	88.00
ELEVATION	172.52	172.60	173.00	174.00

HYDROGRAPH AT STATION POND7. PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	JAN	1200	1	0.	.0	171.0	1	JAN	2245	44	0.	.1	171.0	2	JAN	0930	87	2.	.6	171.2
1	JAN	1215	2	0.	.0	171.0	1	JAN	2300	45	0.	.1	171.1	2	JAN	0945	88	2.	.6	171.2
1	JAN	1230	3	0.	.0	171.0	1	JAN	2315	46	1.	.2	171.1	2	JAN	1000	89	2.	.6	171.2
1	JAN	1245	4	0.	.0	171.0	1	JAN	2330	47	1.	.2	171.1	2	JAN	1015	90	2.	.6	171.2
1	JAN	1300	5	0.	.0	171.0	1	JAN	2345	48	1.	.3	171.1	2	JAN	1030	91	2.	.6	171.2
1	JAN	1315	6	0.	.0	171.0	2	JAN	0000	49	1.	.4	171.2	2	JAN	1045	92	2.	.5	171.2
1	JAN	1330	7	0.	.0	171.0	2	JAN	0015	50	3.	.8	171.3	2	JAN	1100	93	2.	.5	171.2
1	JAN	1345	8	0.	.0	171.0	2	JAN	0030	51	5.	1.3	171.5	2	JAN	1115	94	2.	.5	171.2
1	JAN	1400	9	0.	.0	171.0	2	JAN	0045	52	9.	1.8	171.7	2	JAN	1130	95	2.	.5	171.2
1	JAN	1415	10	0.	.0	171.0	2	JAN	0100	53	11.	2.0	171.8	2	JAN	1145	96	2.	.5	171.2
1	JAN	1430	11	0.	.0	171.0	2	JAN	0115	54	12.	2.2	171.8	2	JAN	1200	97	2.	.5	171.2
1	JAN	1445	12	0.	.0	171.0	2	JAN	0130	55	12.	2.2	171.8	2	JAN	1215	98	2.	.5	171.2
1	JAN	1500	13	0.	.0	171.0	2	JAN	0145	56	11.	2.1	171.8	2	JAN	1230	99	2.	.5	171.2
1	JAN	1515	14	0.	.0	171.0	2	JAN	0200	57	11.	2.1	171.8	2	JAN	1245	100	2.	.4	171.2
1	JAN	1530	15	0.	.0	171.0	2	JAN	0215	58	10.	2.0	171.8	2	JAN	1300	101	1.	.4	171.2
1	JAN	1545	16	0.	.0	171.0	2	JAN	0230	59	9.	1.9	171.7	2	JAN	1315	102	1.	.4	171.2
1	JAN	1600	17	0.	.0	171.0	2	JAN	0245	60	9.	1.8	171.7	2	JAN	1330	103	1.	.4	171.1
1	JAN	1615	18	0.	.0	171.0	2	JAN	0300	61	8.	1.7	171.6	2	JAN	1345	104	1.	.3	171.1
1	JAN	1630	19	0.	.0	171.0	2	JAN	0315	62	7.	1.6	171.6	2	JAN	1400	105	1.	.3	171.1
1	JAN	1645	20	0.	.0	171.0	2	JAN	0330	63	7.	1.5	171.6	2	JAN	1415	106	1.	.3	171.1
1	JAN	1700	21	0.	.0	171.0	2	JAN	0345	64	6.	1.4	171.5	2	JAN	1430	107	1.	.3	171.1
1	JAN	1715	22	0.	.0	171.0	2	JAN	0400	65	6.	1.4	171.5	2	JAN	1445	108	1.	.3	171.1
1	JAN	1730	23	0.	.0	171.0	2	JAN	0415	66	6.	1.3	171.5	2	JAN	1500	109	1.	.2	171.1
1	JAN	1745	24	0.	.0	171.0	2	JAN	0430	67	5.	1.2	171.5	2	JAN	1515	110	1.	.2	171.1
1	JAN	1800	25	0.	.0	171.0	2	JAN	0445	68	5.	1.2	171.5	2	JAN	1530	111	1.	.2	171.1
1	JAN	1815	26	0.	.0	171.0	2	JAN	0500	69	5.	1.1	171.4	2	JAN	1545	112	1.	.2	171.1

1 JAN 1830	27	0.	.0	171.0 *	2 JAN 0515	70	4.	1.1	171.4 *	2 JAN 1600	113	1.	.2	171.1
1 JAN 1845	28	0.	.0	171.0 *	2 JAN 0530	71	4.	1.0	171.4 *	2 JAN 1615	114	1.	.2	171.1
1 JAN 1900	29	0.	.0	171.0 *	2 JAN 0545	72	4.	1.0	171.4 *	2 JAN 1630	115	1.	.2	171.1
1 JAN 1915	30	0.	.0	171.0 *	2 JAN 0600	73	4.	1.0	171.4 *	2 JAN 1645	116	1.	.1	171.1
1 JAN 1930	31	0.	.0	171.0 *	2 JAN 0615	74	3.	.9	171.4 *	2 JAN 1700	117	0.	.1	171.1
1 JAN 1945	32	0.	.0	171.0 *	2 JAN 0630	75	3.	.9	171.3 *	2 JAN 1715	118	0.	.1	171.0
1 JAN 2000	33	0.	.0	171.0 *	2 JAN 0645	76	3.	.9	171.3 *	2 JAN 1730	119	0.	.1	171.0
1 JAN 2015	34	0.	.0	171.0 *	2 JAN 0700	77	3.	.8	171.3 *	2 JAN 1745	120	0.	.1	171.0
1 JAN 2030	35	0.	.0	171.0 *	2 JAN 0715	78	3.	.8	171.3 *	2 JAN 1800	121	0.	.1	171.0
1 JAN 2045	36	0.	.1	171.0 *	2 JAN 0730	79	3.	.8	171.3 *	2 JAN 1815	122	0.	.1	171.0
1 JAN 2100	37	0.	.1	171.0 *	2 JAN 0745	80	3.	.8	171.3 *	2 JAN 1830	123	0.	.1	171.0
1 JAN 2115	38	0.	.1	171.0 *	2 JAN 0800	81	3.	.7	171.3 *	2 JAN 1845	124	0.	.1	171.0
1 JAN 2130	39	0.	.1	171.0 *	2 JAN 0815	82	3.	.7	171.3 *	2 JAN 1900	125	0.	.1	171.0
1 JAN 2145	40	0.	.1	171.0 *	2 JAN 0830	83	3.	.7	171.3 *	2 JAN 1915	126	0.	.1	171.0
1 JAN 2200	41	0.	.1	171.0 *	2 JAN 0845	84	2.	.7	171.3 *	2 JAN 1930	127	0.	.1	171.0
1 JAN 2215	42	0.	.1	171.0 *	2 JAN 0900	85	2.	.7	171.3 *	2 JAN 1945	128	0.	.1	171.0
1 JAN 2230	43	0.	.1	171.0 *	2 JAN 0915	86	2.	.6	171.3 *	2 JAN 2000	129	0.	.1	171.0

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	32.00-HR
+	(CFS)	(HR)				
		(CFS)				
+	12.	13.50	7.	3.	2.	2.
		(INCHES)	2.888	4.353	4.397	4.397
		(AC-FT)	4.	5.	5.	5.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
			6-HR	24-HR	72-HR	32.00-HR
+	(AC-FT)	(HR)				
	2.	13.50	2.	1.	0.	0.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
			6-HR	24-HR	72-HR	32.00-HR
+	(FEET)	(HR)				
	171.83	13.50	171.59	171.25	171.19	171.19

CUMULATIVE AREA = .02 SQ MI

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31 KK * BSN4 *

5 IN TIME DATA FOR INPUT TIME SERIES

 JXMIN 15 TIME INTERVAL IN MINUTES

 JXDATE 1JAN 4 STARTING DATE

 JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

TAREA .02 SUBBASIN AREA

PRECIPITATION DATA

PB

STORM 1.00 BASIN TOTAL PRECIPITATION

34 PI

INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

44 LS

SCS LOSS RATE

STRTL .94 INITIAL ABSTRACTION
CRVNBR 68.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

45 UD

SCS DIMENSIONLESS UNITGRAPH

TLAG .85 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH

19 END-OF-PERIOD ORDINATES

1.	5.	9.	10.	9.	6.	4.	3.	2.	1.
1.	0.	0.	0.	0.	0.	0.	0.	0.	

HYDROGRAPH AT STATION BSN4

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	2	JAN	0730	79	.00	.00	.00	0.
1	JAN	1530	15	.00	.00	.00	0.	2	JAN	0745	80	.00	.00	.00	0.
1	JAN	1545	16	.00	.00	.00	0.	2	JAN	0800	81	.00	.00	.00	0.
1	JAN	1600	17	.00	.00	.00	0.	2	JAN	0815	82	.00	.00	.00	0.

1 JAN 1615	18	.00	.00	.00	0.	*	2 JAN 0830	83	.00	.00	.00	0.
1 JAN 1630	19	.00	.00	.00	0.	*	2 JAN 0845	84	.00	.00	.00	0.
1 JAN 1645	20	.00	.00	.00	0.	*	2 JAN 0900	85	.00	.00	.00	0.
1 JAN 1700	21	.00	.00	.00	0.	*	2 JAN 0915	86	.00	.00	.00	0.
1 JAN 1715	22	.00	.00	.00	0.	*	2 JAN 0930	87	.00	.00	.00	0.
1 JAN 1730	23	.00	.00	.00	0.	*	2 JAN 0945	88	.00	.00	.00	0.
1 JAN 1745	24	.00	.00	.00	0.	*	2 JAN 1000	89	.00	.00	.00	0.
1 JAN 1800	25	.00	.00	.00	0.	*	2 JAN 1015	90	.00	.00	.00	0.
1 JAN 1815	26	.01	.00	.00	0.	*	2 JAN 1030	91	.00	.00	.00	0.
1 JAN 1830	27	.01	.00	.00	0.	*	2 JAN 1045	92	.00	.00	.00	0.
1 JAN 1845	28	.00	.00	.00	0.	*	2 JAN 1100	93	.00	.00	.00	0.
1 JAN 1900	29	.01	.00	.00	0.	*	2 JAN 1115	94	.00	.00	.00	0.
1 JAN 1915	30	.00	.00	.00	0.	*	2 JAN 1130	95	.00	.00	.00	0.
1 JAN 1930	31	.01	.00	.00	0.	*	2 JAN 1145	96	.00	.00	.00	0.
1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	0.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	0.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	0.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	0.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	0.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
0.	12.75	0.	0.	0.	0.
		(INCHES)	.070	.100	.101
		(AC-FT)	0.	0.	0.

CUMULATIVE AREA = .02 SQ MI

NG *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN4
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.04	.01	.03	3.
1	JAN	1215	2	.02	.02	.00	0.	*	2	JAN	0430	67	.03	.01	.03	2.
1	JAN	1230	3	.02	.02	.00	0.	*	2	JAN	0445	68	.04	.01	.03	2.
1	JAN	1245	4	.02	.01	.00	0.	*	2	JAN	0500	69	.03	.01	.03	2.
1	JAN	1300	5	.02	.02	.00	0.	*	2	JAN	0515	70	.04	.01	.03	2.
1	JAN	1315	6	.02	.02	.00	0.	*	2	JAN	0530	71	.03	.01	.03	2.
1	JAN	1330	7	.02	.02	.00	0.	*	2	JAN	0545	72	.04	.01	.03	2.
1	JAN	1345	8	.02	.01	.00	0.	*	2	JAN	0600	73	.03	.01	.03	2.
1	JAN	1400	9	.02	.02	.00	0.	*	2	JAN	0615	74	.04	.01	.03	2.
1	JAN	1415	10	.02	.02	.00	0.	*	2	JAN	0630	75	.03	.01	.03	2.
1	JAN	1430	11	.03	.03	.00	0.	*	2	JAN	0645	76	.03	.01	.03	2.
1	JAN	1445	12	.02	.02	.00	0.	*	2	JAN	0700	77	.04	.01	.03	2.
1	JAN	1500	13	.02	.02	.00	0.	*	2	JAN	0715	78	.03	.01	.03	1.
1	JAN	1515	14	.02	.02	.00	0.	*	2	JAN	0730	79	.04	.01	.03	1.
1	JAN	1530	15	.03	.03	.00	0.	*	2	JAN	0745	80	.03	.01	.03	1.
1	JAN	1545	16	.02	.02	.00	0.	*	2	JAN	0800	81	.04	.01	.03	2.
1	JAN	1600	17	.02	.02	.00	0.	*	2	JAN	0815	82	.02	.00	.02	1.
1	JAN	1615	18	.03	.03	.00	0.	*	2	JAN	0830	83	.02	.00	.02	1.
1	JAN	1630	19	.03	.03	.00	0.	*	2	JAN	0845	84	.02	.00	.02	1.
1	JAN	1645	20	.03	.03	.00	0.	*	2	JAN	0900	85	.02	.00	.02	1.
1	JAN	1700	21	.03	.03	.00	0.	*	2	JAN	0915	86	.02	.00	.02	1.
1	JAN	1715	22	.03	.03	.00	0.	*	2	JAN	0930	87	.02	.00	.02	1.
1	JAN	1730	23	.03	.03	.00	0.	*	2	JAN	0945	88	.02	.00	.02	1.
1	JAN	1745	24	.03	.03	.00	0.	*	2	JAN	1000	89	.02	.00	.02	1.
1	JAN	1800	25	.03	.03	.00	0.	*	2	JAN	1015	90	.02	.00	.02	1.
1	JAN	1815	26	.04	.04	.00	0.	*	2	JAN	1030	91	.02	.00	.02	1.
1	JAN	1830	27	.04	.04	.00	0.	*	2	JAN	1045	92	.02	.00	.02	1.
1	JAN	1845	28	.04	.04	.00	0.	*	2	JAN	1100	93	.02	.00	.02	1.
1	JAN	1900	29	.04	.04	.00	0.	*	2	JAN	1115	94	.02	.00	.02	1.
1	JAN	1915	30	.04	.04	.00	0.	*	2	JAN	1130	95	.02	.00	.02	1.
1	JAN	1930	31	.04	.04	.00	0.	*	2	JAN	1145	96	.02	.00	.02	1.
1	JAN	1945	32	.04	.04	.00	0.	*	2	JAN	1200	97	.02	.00	.02	1.
1	JAN	2000	33	.04	.04	.00	0.	*	2	JAN	1215	98	.00	.00	.00	1.
1	JAN	2015	34	.05	.05	.01	0.	*	2	JAN	1230	99	.00	.00	.00	1.
1	JAN	2030	35	.05	.05	.01	0.	*	2	JAN	1245	100	.00	.00	.00	1.
1	JAN	2045	36	.05	.04	.01	0.	*	2	JAN	1300	101	.00	.00	.00	1.
1	JAN	2100	37	.05	.05	.01	0.	*	2	JAN	1315	102	.00	.00	.00	0.
1	JAN	2115	38	.06	.05	.01	0.	*	2	JAN	1330	103	.00	.00	.00	0.
1	JAN	2130	39	.06	.05	.01	0.	*	2	JAN	1345	104	.00	.00	.00	0.
1	JAN	2145	40	.07	.05	.02	0.	*	2	JAN	1400	105	.00	.00	.00	0.
1	JAN	2200	41	.07	.05	.02	1.	*	2	JAN	1415	106	.00	.00	.00	0.
1	JAN	2215	42	.09	.07	.03	1.	*	2	JAN	1430	107	.00	.00	.00	0.
1	JAN	2230	43	.09	.06	.03	1.	*	2	JAN	1445	108	.00	.00	.00	0.
1	JAN	2245	44	.12	.08	.04	1.	*	2	JAN	1500	109	.00	.00	.00	0.
1	JAN	2300	45	.12	.08	.04	1.	*	2	JAN	1515	110	.00	.00	.00	0.

1 JAN 2315	46	.19	.12	.07	1.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	2.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	3.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	6.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	13.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	20.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	22.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	21.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	17.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	13.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	10.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	8.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	7.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	5.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	5.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	4.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	3.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	3.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	3.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	3.	*						

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TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
	(HR)				
	(CFS)				
22.	12.75	7.	2.	2.	2.
	(INCHES)	3.455	4.429	4.441	4.441
	(AC-FT)	4.	5.	5.	5.

CUMULATIVE AREA = .02 SQ MI

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 * *
 46 KK * PD7&4 *
 * *

47 HC HYDROGRAPH COMBINATION
 ICOMP 2 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION PD7&4
 SUM OF 2 HYDROGRAPHS
 PLAN 1, RATIO = 7.80

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DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*
					*						*						*						*
1	JAN	1200	1	0.	*	1	JAN	2015	34	0.	*	2	JAN	0430	67	8.	*	2	JAN	1245	100	2.	
1	JAN	1215	2	0.	*	1	JAN	2030	35	0.	*	2	JAN	0445	68	7.	*	2	JAN	1300	101	2.	
1	JAN	1230	3	0.	*	1	JAN	2045	36	0.	*	2	JAN	0500	69	7.	*	2	JAN	1315	102	2.	
1	JAN	1245	4	0.	*	1	JAN	2100	37	0.	*	2	JAN	0515	70	6.	*	2	JAN	1330	103	2.	
1	JAN	1300	5	0.	*	1	JAN	2115	38	1.	*	2	JAN	0530	71	6.	*	2	JAN	1345	104	1.	
1	JAN	1315	6	0.	*	1	JAN	2130	39	1.	*	2	JAN	0545	72	5.	*	2	JAN	1400	105	1.	
1	JAN	1330	7	0.	*	1	JAN	2145	40	1.	*	2	JAN	0600	73	5.	*	2	JAN	1415	106	1.	
1	JAN	1345	8	0.	*	1	JAN	2200	41	1.	*	2	JAN	0615	74	5.	*	2	JAN	1430	107	1.	
1	JAN	1400	9	0.	*	1	JAN	2215	42	1.	*	2	JAN	0630	75	5.	*	2	JAN	1445	108	1.	
1	JAN	1415	10	0.	*	1	JAN	2230	43	1.	*	2	JAN	0645	76	5.	*	2	JAN	1500	109	1.	
1	JAN	1430	11	0.	*	1	JAN	2245	44	1.	*	2	JAN	0700	77	4.	*	2	JAN	1515	110	1.	
1	JAN	1445	12	0.	*	1	JAN	2300	45	2.	*	2	JAN	0715	78	4.	*	2	JAN	1530	111	1.	
1	JAN	1500	13	0.	*	1	JAN	2315	46	2.	*	2	JAN	0730	79	4.	*	2	JAN	1545	112	1.	
1	JAN	1515	14	0.	*	1	JAN	2330	47	2.	*	2	JAN	0745	80	4.	*	2	JAN	1600	113	1.	
1	JAN	1530	15	0.	*	1	JAN	2345	48	4.	*	2	JAN	0800	81	4.	*	2	JAN	1615	114	1.	
1	JAN	1545	16	0.	*	2	JAN	0000	49	8.	*	2	JAN	0815	82	4.	*	2	JAN	1630	115	1.	
1	JAN	1600	17	0.	*	2	JAN	0015	50	16.	*	2	JAN	0830	83	4.	*	2	JAN	1645	116	1.	
1	JAN	1615	18	0.	*	2	JAN	0030	51	25.	*	2	JAN	0845	84	4.	*	2	JAN	1700	117	0.	
1	JAN	1630	19	0.	*	2	JAN	0045	52	31.	*	2	JAN	0900	85	4.	*	2	JAN	1715	118	0.	
1	JAN	1645	20	0.	*	2	JAN	0100	53	31.	*	2	JAN	0915	86	4.	*	2	JAN	1730	119	0.	
1	JAN	1700	21	0.	*	2	JAN	0115	54	28.	*	2	JAN	0930	87	3.	*	2	JAN	1745	120	0.	
1	JAN	1715	22	0.	*	2	JAN	0130	55	25.	*	2	JAN	0945	88	3.	*	2	JAN	1800	121	0.	
1	JAN	1730	23	0.	*	2	JAN	0145	56	22.	*	2	JAN	1000	89	3.	*	2	JAN	1815	122	0.	
1	JAN	1745	24	0.	*	2	JAN	0200	57	19.	*	2	JAN	1015	90	3.	*	2	JAN	1830	123	0.	
1	JAN	1800	25	0.	*	2	JAN	0215	58	17.	*	2	JAN	1030	91	3.	*	2	JAN	1845	124	0.	
1	JAN	1815	26	0.	*	2	JAN	0230	59	15.	*	2	JAN	1045	92	3.	*	2	JAN	1900	125	0.	
1	JAN	1830	27	0.	*	2	JAN	0245	60	13.	*	2	JAN	1100	93	3.	*	2	JAN	1915	126	0.	
1	JAN	1845	28	0.	*	2	JAN	0300	61	12.	*	2	JAN	1115	94	3.	*	2	JAN	1930	127	0.	
1	JAN	1900	29	0.	*	2	JAN	0315	62	11.	*	2	JAN	1130	95	3.	*	2	JAN	1945	128	0.	
1	JAN	1915	30	0.	*	2	JAN	0330	63	10.	*	2	JAN	1145	96	3.	*	2	JAN	2000	129	0.	
1	JAN	1930	31	0.	*	2	JAN	0345	64	9.	*	2	JAN	1200	97	3.	*						
1	JAN	1945	32	0.	*	2	JAN	0400	65	9.	*	2	JAN	1215	98	3.	*						
1	JAN	2000	33	0.	*	2	JAN	0415	66	8.	*	2	JAN	1230	99	2.	*						
					*						*						*						*

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
+	31.	14.	5.	4.	4.
	(INCHES)	3.112	4.364	4.417	4.417
	(AC-FT)	7.	10.	10.	10.

CUMULATIVE AREA = .04 SQ MI

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48 KK

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* POND6 *
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HYDROGRAPH ROUTING DATA

49 RS

STORAGE ROUTING

NSTPS 1 NUMBER OF SUBREACHES
 ITYP ELEV TYPE OF INITIAL CONDITION
 RSVRIC 162.00 INITIAL CONDITION
 X .00 WORKING R AND D COEFFICIENT

50 SA	AREA	1.9	2.0	2.1	2.3						
51 SE	ELEVATION	170.00	171.00	172.00	173.00						
52 SQ	DISCHARGE	0. 22.	2.	4.	7.	9.	11.	13.	15.	18.	20.
54 SE	ELEVATION	170.00 175.90	170.72	171.11	171.42	171.77	172.21	172.75	173.40	174.14	174.98

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	1.92	3.98	6.20
ELEVATION	170.00	171.00	172.00	173.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	1.37	1.92	2.14	2.77	3.50	3.98	4.44	5.63	6.20
OUTFLOW	.00	2.20	3.78	4.40	6.60	8.80	9.95	11.00	13.20	14.05
ELEVATION	170.00	170.72	171.00	171.11	171.42	171.77	172.00	172.21	172.75	173.00
STORAGE	7.13	8.91	11.04	13.50						
OUTFLOW	15.40	17.60	19.80	22.00						
ELEVATION	173.40	174.14	174.98	175.90						

 HYDROGRAPH AT STATION POND6
 PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	JAN	1200	1	0.	.0	170.0	1	JAN	2245	44	0.	.2	170.1	2	JAN	0930	87	6.	2.6	171.3
1	JAN	1215	2	0.	.0	170.0	2	JAN	2300	45	0.	.2	170.1	3	JAN	0945	88	6.	2.6	171.3
1	JAN	1230	3	0.	.0	170.0	3	JAN	2315	46	0.	.2	170.1	4	JAN	1000	89	6.	2.5	171.3
1	JAN	1245	4	0.	.0	170.0	4	JAN	2330	47	0.	.3	170.1	5	JAN	1015	90	6.	2.5	171.3
1	JAN	1300	5	0.	.0	170.0	5	JAN	2345	48	1.	.3	170.2	6	JAN	1030	91	5.	2.4	171.2
1	JAN	1315	6	0.	.0	170.0	6	JAN	0000	49	1.	.4	170.2	7	JAN	1045	92	5.	2.4	171.2
1	JAN	1330	7	0.	.0	170.0	7	JAN	0015	50	1.	.7	170.4	8	JAN	1100	93	5.	2.3	171.2
1	JAN	1345	8	0.	.0	170.0	8	JAN	0030	51	2.	1.1	170.6	9	JAN	1115	94	5.	2.3	171.2
1	JAN	1400	9	0.	.0	170.0	9	JAN	0045	52	3.	1.6	170.8	10	JAN	1130	95	5.	2.2	171.2
1	JAN	1415	10	0.	.0	170.0	10	JAN	0100	53	4.	2.2	171.1	11	JAN	1145	96	5.	2.2	171.1
1	JAN	1430	11	0.	.0	170.0	11	JAN	0115	54	6.	2.7	171.4	12	JAN	1200	97	4.	2.2	171.1
1	JAN	1445	12	0.	.0	170.0	12	JAN	0130	55	8.	3.1	171.6	13	JAN	1215	98	4.	2.1	171.1
1	JAN	1500	13	0.	.0	170.0	13	JAN	0145	56	8.	3.4	171.7	14	JAN	1230	99	4.	2.1	171.1
1	JAN	1515	14	0.	.0	170.0	14	JAN	0200	57	9.	3.6	171.8	15	JAN	1245	100	4.	2.0	171.1
1	JAN	1530	15	0.	.0	170.0	15	JAN	0215	58	10.	3.8	171.9	16	JAN	1300	101	4.	2.0	171.0
1	JAN	1545	16	0.	.0	170.0	16	JAN	0230	59	10.	3.9	172.0	17	JAN	1315	102	4.	2.0	171.0

1 JAN 1600	17	0.	.0	170.0 *	2 JAN 0245	60	10.	4.0	172.0 *	2 JAN 1330	103	4.	1.9	171.0
1 JAN 1615	18	0.	.0	170.0 *	2 JAN 0300	61	10.	4.1	172.0 *	2 JAN 1345	104	4.	1.9	171.0
1 JAN 1630	19	0.	.0	170.0 *	2 JAN 0315	62	10.	4.1	172.0 *	2 JAN 1400	105	4.	1.8	171.0
1 JAN 1645	20	0.	.0	170.0 *	2 JAN 0330	63	10.	4.1	172.0 *	2 JAN 1415	106	3.	1.8	170.9
1 JAN 1700	21	0.	.0	170.0 *	2 JAN 0345	64	10.	4.1	172.0 *	2 JAN 1430	107	3.	1.7	170.9
1 JAN 1715	22	0.	.1	170.0 *	2 JAN 0400	65	10.	4.0	172.0 *	2 JAN 1445	108	3.	1.7	170.9
1 JAN 1730	23	0.	.1	170.0 *	2 JAN 0415	66	10.	4.0	172.0 *	2 JAN 1500	109	3.	1.6	170.9
1 JAN 1745	24	0.	.1	170.0 *	2 JAN 0430	67	10.	4.0	172.0 *	2 JAN 1515	110	3.	1.6	170.8
1 JAN 1800	25	0.	.1	170.0 *	2 JAN 0445	68	10.	3.9	172.0 *	2 JAN 1530	111	3.	1.6	170.8
1 JAN 1815	26	0.	.1	170.0 *	2 JAN 0500	69	10.	3.9	171.9 *	2 JAN 1545	112	3.	1.5	170.8
1 JAN 1830	27	0.	.1	170.0 *	2 JAN 0515	70	9.	3.8	171.9 *	2 JAN 1600	113	3.	1.5	170.8
1 JAN 1845	28	0.	.1	170.0 *	2 JAN 0530	71	9.	3.7	171.9 *	2 JAN 1615	114	2.	1.4	170.8
1 JAN 1900	29	0.	.1	170.0 *	2 JAN 0545	72	9.	3.6	171.8 *	2 JAN 1630	115	2.	1.4	170.7
1 JAN 1915	30	0.	.1	170.0 *	2 JAN 0600	73	9.	3.6	171.8 *	2 JAN 1645	116	2.	1.4	170.7
1 JAN 1930	31	0.	.1	170.0 *	2 JAN 0615	74	9.	3.5	171.8 *	2 JAN 1700	117	2.	1.3	170.7
1 JAN 1945	32	0.	.1	170.0 *	2 JAN 0630	75	9.	3.4	171.7 *	2 JAN 1715	118	2.	1.3	170.7
1 JAN 2000	33	0.	.1	170.0 *	2 JAN 0645	76	8.	3.3	171.7 *	2 JAN 1730	119	2.	1.3	170.7
1 JAN 2015	34	0.	.1	170.1 *	2 JAN 0700	77	8.	3.3	171.7 *	2 JAN 1745	120	2.	1.2	170.6
1 JAN 2030	35	0.	.1	170.1 *	2 JAN 0715	78	8.	3.2	171.6 *	2 JAN 1800	121	2.	1.2	170.6
1 JAN 2045	36	0.	.1	170.1 *	2 JAN 0730	79	8.	3.1	171.6 *	2 JAN 1815	122	2.	1.2	170.6
1 JAN 2100	37	0.	.1	170.1 *	2 JAN 0745	80	7.	3.0	171.6 *	2 JAN 1830	123	2.	1.1	170.6
1 JAN 2115	38	0.	.1	170.1 *	2 JAN 0800	81	7.	3.0	171.5 *	2 JAN 1845	124	2.	1.1	170.6
1 JAN 2130	39	0.	.1	170.1 *	2 JAN 0815	82	7.	2.9	171.5 *	2 JAN 1900	125	2.	1.1	170.6
1 JAN 2145	40	0.	.1	170.1 *	2 JAN 0830	83	7.	2.9	171.5 *	2 JAN 1915	126	2.	1.0	170.5
1 JAN 2200	41	0.	.1	170.1 *	2 JAN 0845	84	7.	2.8	171.4 *	2 JAN 1930	127	2.	1.0	170.5
1 JAN 2215	42	0.	.2	170.1 *	2 JAN 0900	85	6.	2.7	171.4 *	2 JAN 1945	128	2.	1.0	170.5
1 JAN 2230	43	0.	.2	170.1 *	2 JAN 0915	86	6.	2.7	171.4 *	2 JAN 2000	129	2.	1.0	170.5

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
+	10.	9.	5.	3.	3.
	(INCHES)	2.010	3.984	4.001	4.001
	(AC-FT)	5.	9.	9.	9.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	32.00-HR
+	(AC-FT)				
	4.	4.	2.	2.	2.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	32.00-HR
+	(FEET)				
	172.05	171.88	171.05	170.79	170.79

CUMULATIVE AREA = .04 SQ MI

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5 IN

TIME DATA FOR INPUT TIME SERIES

JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

57 BA

SUBBASIN CHARACTERISTICS

TAREA .05 SUBBASIN AREA

PRECIPITATION DATA

58 PB

STORM 1.00 BASIN TOTAL PRECIPITATION

59 PI

INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

69 LS

SCS LOSS RATE

STRTL .94 INITIAL ABSTRACTION
CRVNBR 68.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

70 UD

SCS DIMENSIONLESS UNITGRAPH

TLAG .84 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
19 END-OF-PERIOD ORDINATES

4.	14.	25.	27.	24.	17.	11.	7.	5.	3.
2.	1.	1.	1.	0.	0.	0.	0.	0.	

HYDROGRAPH AT STATION BSN7

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.

1 JAN 1345	8	.00	.00	.00	0.	*	2 JAN 0600	73	.00	.00	.00	0.
1 JAN 1400	9	.00	.00	.00	0.	*	2 JAN 0615	74	.00	.00	.00	0.
1 JAN 1415	10	.00	.00	.00	0.	*	2 JAN 0630	75	.00	.00	.00	0.
1 JAN 1430	11	.00	.00	.00	0.	*	2 JAN 0645	76	.00	.00	.00	0.
1 JAN 1445	12	.00	.00	.00	0.	*	2 JAN 0700	77	.00	.00	.00	0.
1 JAN 1500	13	.00	.00	.00	0.	*	2 JAN 0715	78	.00	.00	.00	0.
1 JAN 1515	14	.00	.00	.00	0.	*	2 JAN 0730	79	.00	.00	.00	0.
1 JAN 1530	15	.00	.00	.00	0.	*	2 JAN 0745	80	.00	.00	.00	0.
1 JAN 1545	16	.00	.00	.00	0.	*	2 JAN 0800	81	.00	.00	.00	0.
1 JAN 1600	17	.00	.00	.00	0.	*	2 JAN 0815	82	.00	.00	.00	0.
1 JAN 1615	18	.00	.00	.00	0.	*	2 JAN 0830	83	.00	.00	.00	0.
1 JAN 1630	19	.00	.00	.00	0.	*	2 JAN 0845	84	.00	.00	.00	0.
1 JAN 1645	20	.00	.00	.00	0.	*	2 JAN 0900	85	.00	.00	.00	0.
1 JAN 1700	21	.00	.00	.00	0.	*	2 JAN 0915	86	.00	.00	.00	0.
1 JAN 1715	22	.00	.00	.00	0.	*	2 JAN 0930	87	.00	.00	.00	0.
1 JAN 1730	23	.00	.00	.00	0.	*	2 JAN 0945	88	.00	.00	.00	0.
1 JAN 1745	24	.00	.00	.00	0.	*	2 JAN 1000	89	.00	.00	.00	0.
1 JAN 1800	25	.00	.00	.00	0.	*	2 JAN 1015	90	.00	.00	.00	0.
1 JAN 1815	26	.01	.00	.00	0.	*	2 JAN 1030	91	.00	.00	.00	0.
1 JAN 1830	27	.01	.00	.00	0.	*	2 JAN 1045	92	.00	.00	.00	0.
1 JAN 1845	28	.00	.00	.00	0.	*	2 JAN 1100	93	.00	.00	.00	0.
1 JAN 1900	29	.01	.00	.00	0.	*	2 JAN 1115	94	.00	.00	.00	0.
1 JAN 1915	30	.00	.00	.00	0.	*	2 JAN 1130	95	.00	.00	.00	0.
1 JAN 1930	31	.01	.00	.00	0.	*	2 JAN 1145	96	.00	.00	.00	0.
1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	0.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	1.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	1.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	1.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	1.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	1.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	1.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

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TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW TIME
+ (CFS) (HR)
(CFS)
+ 1. 12.75
(INCHES) .070 .100 .101 .101
(AC-FT) 0. 0. 0. 0.

CUMULATIVE AREA = .05 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN7
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.04	.01	.03	7.
1	JAN	1215	2	.02	.02	.00	0.	*	2	JAN	0430	67	.03	.01	.03	7.
1	JAN	1230	3	.02	.02	.00	0.	*	2	JAN	0445	68	.04	.01	.03	6.
1	JAN	1245	4	.02	.01	.00	0.	*	2	JAN	0500	69	.03	.01	.03	6.
1	JAN	1300	5	.02	.02	.00	0.	*	2	JAN	0515	70	.04	.01	.03	5.
1	JAN	1315	6	.02	.02	.00	0.	*	2	JAN	0530	71	.03	.01	.03	5.
1	JAN	1330	7	.02	.02	.00	0.	*	2	JAN	0545	72	.04	.01	.03	5.
1	JAN	1345	8	.02	.01	.00	0.	*	2	JAN	0600	73	.03	.01	.03	4.
1	JAN	1400	9	.02	.02	.00	0.	*	2	JAN	0615	74	.04	.01	.03	4.
1	JAN	1415	10	.02	.02	.00	0.	*	2	JAN	0630	75	.03	.01	.03	4.
1	JAN	1430	11	.03	.03	.00	0.	*	2	JAN	0645	76	.03	.01	.03	4.
1	JAN	1445	12	.02	.02	.00	0.	*	2	JAN	0700	77	.04	.01	.03	4.
1	JAN	1500	13	.02	.02	.00	0.	*	2	JAN	0715	78	.03	.01	.03	4.
1	JAN	1515	14	.02	.02	.00	0.	*	2	JAN	0730	79	.04	.01	.03	4.
1	JAN	1530	15	.03	.03	.00	0.	*	2	JAN	0745	80	.03	.01	.03	4.
1	JAN	1545	16	.02	.02	.00	0.	*	2	JAN	0800	81	.04	.01	.03	4.
1	JAN	1600	17	.02	.02	.00	0.	*	2	JAN	0815	82	.02	.00	.02	4.
1	JAN	1615	18	.03	.03	.00	0.	*	2	JAN	0830	83	.02	.00	.02	4.
1	JAN	1630	19	.03	.03	.00	0.	*	2	JAN	0845	84	.02	.00	.02	4.
1	JAN	1645	20	.03	.03	.00	0.	*	2	JAN	0900	85	.02	.00	.02	4.
1	JAN	1700	21	.03	.03	.00	0.	*	2	JAN	0915	86	.02	.00	.02	3.
1	JAN	1715	22	.03	.03	.00	0.	*	2	JAN	0930	87	.02	.00	.02	3.
1	JAN	1730	23	.03	.03	.00	0.	*	2	JAN	0945	88	.02	.00	.02	3.
1	JAN	1745	24	.03	.03	.00	0.	*	2	JAN	1000	89	.02	.00	.02	3.
1	JAN	1800	25	.03	.03	.00	0.	*	2	JAN	1015	90	.02	.00	.02	3.
1	JAN	1815	26	.04	.04	.00	0.	*	2	JAN	1030	91	.02	.00	.02	3.
1	JAN	1830	27	.04	.04	.00	0.	*	2	JAN	1045	92	.02	.00	.02	3.
1	JAN	1845	28	.04	.04	.00	0.	*	2	JAN	1100	93	.02	.00	.02	3.
1	JAN	1900	29	.04	.04	.00	0.	*	2	JAN	1115	94	.02	.00	.02	3.
1	JAN	1915	30	.04	.04	.00	1.	*	2	JAN	1130	95	.02	.00	.02	3.
1	JAN	1930	31	.04	.04	.00	1.	*	2	JAN	1145	96	.02	.00	.02	3.
1	JAN	1945	32	.04	.04	.00	1.	*	2	JAN	1200	97	.02	.00	.02	3.
1	JAN	2000	33	.04	.04	.00	1.	*	2	JAN	1215	98	.00	.00	.00	3.
1	JAN	2015	34	.05	.05	.01	1.	*	2	JAN	1230	99	.00	.00	.00	2.
1	JAN	2030	35	.05	.05	.01	1.	*	2	JAN	1245	100	.00	.00	.00	2.

1 JAN 2045	36	.05	.04	.01	1.	*	2 JAN 1300	101	.00	.00	.00	1.
1 JAN 2100	37	.05	.05	.01	1.	*	2 JAN 1315	102	.00	.00	.00	1.
1 JAN 2115	38	.06	.05	.01	1.	*	2 JAN 1330	103	.00	.00	.00	1.
1 JAN 2130	39	.06	.05	.01	1.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	1.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.07	.03	2.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	2.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	2.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	3.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	4.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	5.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	8.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	18.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	37.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	55.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	61.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	56.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	46.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	35.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	28.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	22.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	18.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	15.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	12.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	11.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	9.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	8.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	8.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	7.	*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
61.	12.75	20.	7.	5.	5.
	(INCHES)	3.455	4.429	4.441	4.441
	(AC-FT)	10.	13.	13.	13.

CUMULATIVE AREA = .05 SQ MI

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* 7PD6 *
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71 KK

72 HC

HYDROGRAPH COMBINATION

ICOMP

2 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION 7PD6
SUM OF 2 HYDROGRAPHS
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*
1	JAN	1200	1	0.	*	1	JAN	2015	34	1.	*	2	JAN	0430	67	17.	*	2	JAN	1245	100	6.	*
1	JAN	1215	2	0.	*	1	JAN	2030	35	1.	*	2	JAN	0445	68	16.	*	2	JAN	1300	101	5.	*
1	JAN	1230	3	0.	*	1	JAN	2045	36	1.	*	2	JAN	0500	69	15.	*	2	JAN	1315	102	5.	*
1	JAN	1245	4	0.	*	1	JAN	2100	37	1.	*	2	JAN	0515	70	15.	*	2	JAN	1330	103	4.	*
1	JAN	1300	5	0.	*	1	JAN	2115	38	1.	*	2	JAN	0530	71	14.	*	2	JAN	1345	104	4.	*
1	JAN	1315	6	0.	*	1	JAN	2130	39	1.	*	2	JAN	0545	72	14.	*	2	JAN	1400	105	4.	*
1	JAN	1330	7	0.	*	1	JAN	2145	40	1.	*	2	JAN	0600	73	13.	*	2	JAN	1415	106	4.	*
1	JAN	1345	8	0.	*	1	JAN	2200	41	2.	*	2	JAN	0615	74	13.	*	2	JAN	1430	107	3.	*
1	JAN	1400	9	0.	*	1	JAN	2215	42	2.	*	2	JAN	0630	75	13.	*	2	JAN	1445	108	3.	*
1	JAN	1415	10	0.	*	1	JAN	2230	43	2.	*	2	JAN	0645	76	12.	*	2	JAN	1500	109	3.	*
1	JAN	1430	11	0.	*	1	JAN	2245	44	3.	*	2	JAN	0700	77	12.	*	2	JAN	1515	110	3.	*
1	JAN	1445	12	0.	*	1	JAN	2300	45	3.	*	2	JAN	0715	78	12.	*	2	JAN	1530	111	3.	*
1	JAN	1500	13	0.	*	1	JAN	2315	46	4.	*	2	JAN	0730	79	12.	*	2	JAN	1545	112	3.	*
1	JAN	1515	14	0.	*	1	JAN	2330	47	5.	*	2	JAN	0745	80	12.	*	2	JAN	1600	113	3.	*
1	JAN	1530	15	0.	*	1	JAN	2345	48	8.	*	2	JAN	0800	81	11.	*	2	JAN	1615	114	2.	*
1	JAN	1545	16	0.	*	2	JAN	0000	49	19.	*	2	JAN	0815	82	11.	*	2	JAN	1630	115	2.	*
1	JAN	1600	17	0.	*	2	JAN	0015	50	38.	*	2	JAN	0830	83	11.	*	2	JAN	1645	116	2.	*
1	JAN	1615	18	0.	*	2	JAN	0030	51	57.	*	2	JAN	0845	84	10.	*	2	JAN	1700	117	2.	*
1	JAN	1630	19	0.	*	2	JAN	0045	52	64.	*	2	JAN	0900	85	10.	*	2	JAN	1715	118	2.	*
1	JAN	1645	20	0.	*	2	JAN	0100	53	61.	*	2	JAN	0915	86	10.	*	2	JAN	1730	119	2.	*
1	JAN	1700	21	0.	*	2	JAN	0115	54	52.	*	2	JAN	0930	87	9.	*	2	JAN	1745	120	2.	*
1	JAN	1715	22	0.	*	2	JAN	0130	55	43.	*	2	JAN	0945	88	9.	*	2	JAN	1800	121	2.	*
1	JAN	1730	23	1.	*	2	JAN	0145	56	36.	*	2	JAN	1000	89	9.	*	2	JAN	1815	122	2.	*
1	JAN	1745	24	1.	*	2	JAN	0200	57	31.	*	2	JAN	1015	90	8.	*	2	JAN	1830	123	2.	*
1	JAN	1800	25	1.	*	2	JAN	0215	58	28.	*	2	JAN	1030	91	8.	*	2	JAN	1845	124	2.	*
1	JAN	1815	26	1.	*	2	JAN	0230	59	25.	*	2	JAN	1045	92	8.	*	2	JAN	1900	125	2.	*
1	JAN	1830	27	1.	*	2	JAN	0245	60	22.	*	2	JAN	1100	93	8.	*	2	JAN	1915	126	2.	*
1	JAN	1845	28	1.	*	2	JAN	0300	61	21.	*	2	JAN	1115	94	8.	*	2	JAN	1930	127	2.	*
1	JAN	1900	29	1.	*	2	JAN	0315	62	19.	*	2	JAN	1130	95	8.	*	2	JAN	1945	128	2.	*
1	JAN	1915	30	1.	*	2	JAN	0330	63	19.	*	2	JAN	1145	96	7.	*	2	JAN	2000	129	2.	*
1	JAN	1930	31	1.	*	2	JAN	0345	64	18.	*	2	JAN	1200	97	7.	*						*
1	JAN	1945	32	1.	*	2	JAN	0400	65	18.	*	2	JAN	1215	98	7.	*						*
1	JAN	2000	33	1.	*	2	JAN	0415	66	17.	*	2	JAN	1230	99	7.	*						*

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
(CFS)	(HR)	6-HR	24-HR	72-HR	32.00-HR
64.	12.75	28.	11.	8.	8.
(INCHES)		2.665	4.198	4.248	4.248
(AC-FT)		14.	22.	22.	22.

CUMULATIVE AREA = .10 SQ MI

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73 KK * POND5 *

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HYDROGRAPH ROUTING DATA

74 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 159.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

75 SA AREA 2.7 2.8 3.0 3.2

76 SE ELEVATION 167.00 168.00 169.00 170.00

77 SQ DISCHARGE 0. 6. 13. 19. 25. 32. 38. 44. 50. 57.
63.

79 SE ELEVATION 167.00 167.55 167.87 168.14 168.39 168.61 168.82 169.01 169.20 169.38
169.60

COMPUTED STORAGE-ELEVATION DATA

STORAGE .00 2.75 5.68 8.78
ELEVATION 167.00 168.00 169.00 170.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE .00 1.49 2.39 2.75 3.15 3.87 4.52 5.14 5.68 6.28
OUTFLOW .00 6.30 12.60 15.63 18.90 25.20 31.50 37.80 43.77 50.40
ELEVATION 167.00 167.55 167.87 168.00 168.14 168.39 168.61 168.82 169.00 169.20

STORAGE 6.84 7.52 8.78
OUTFLOW 56.70 63.00 74.45
ELEVATION 169.38 169.60 170.00

HYDROGRAPH AT STATION POND5 PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
JAN	1200	1	0.	.0	167.0	*	JAN	2245	44	1.	.3	167.1	*	JAN	0930	87	11.	2.2	167.8	
JAN	1215	2	0.	.0	167.0	*	JAN	2300	45	1.	.3	167.1	*	JAN	0945	88	11.	2.2	167.8	
1 JAN	1230	3	0.	.0	167.0	*	1 JAN	2315	46	1.	.4	167.1	*	2 JAN	1000	89	11.	2.1	167.8	
1 JAN	1245	4	0.	.0	167.0	*	1 JAN	2330	47	2.	.4	167.2	*	2 JAN	1015	90	10.	2.1	167.8	
1 JAN	1300	5	0.	.0	167.0	*	1 JAN	2345	48	2.	.5	167.2	*	2 JAN	1030	91	10.	2.0	167.7	
1 JAN	1315	6	0.	.0	167.0	*	2 JAN	0000	49	3.	.7	167.3	*	2 JAN	1045	92	10.	2.0	167.7	

1 JAN 1330	7	0.	.0	167.0 *	2 JAN 0015	50	5.	1.2	167.5 *	2 JAN 1100	93	10.	2.0	167.7
1 JAN 1345	8	0.	.0	167.0 *	2 JAN 0030	51	10.	2.1	167.8 *	2 JAN 1115	94	9.	1.9	167.7
1 JAN 1400	9	0.	.0	167.0 *	2 JAN 0045	52	18.	3.0	168.1 *	2 JAN 1130	95	9.	1.9	167.7
1 JAN 1415	10	0.	.0	167.0 *	2 JAN 0100	53	25.	3.9	168.4 *	2 JAN 1145	96	9.	1.9	167.7
1 JAN 1430	11	0.	.0	167.0 *	2 JAN 0115	54	31.	4.5	168.6 *	2 JAN 1200	97	9.	1.8	167.7
1 JAN 1445	12	0.	.0	167.0 *	2 JAN 0130	55	34.	4.8	168.7 *	2 JAN 1215	98	9.	1.8	167.7
1 JAN 1500	13	0.	.0	167.0 *	2 JAN 0145	56	35.	4.9	168.7 *	2 JAN 1230	99	8.	1.8	167.7
1 JAN 1515	14	0.	.0	167.0 *	2 JAN 0200	57	35.	4.8	168.7 *	2 JAN 1245	100	8.	1.7	167.6
1 JAN 1530	15	0.	.0	167.0 *	2 JAN 0215	58	34.	4.7	168.7 *	2 JAN 1300	101	8.	1.7	167.6
1 JAN 1545	16	0.	.0	167.0 *	2 JAN 0230	59	32.	4.6	168.6 *	2 JAN 1315	102	7.	1.6	167.6
1 JAN 1600	17	0.	.1	167.0 *	2 JAN 0245	60	31.	4.4	168.6 *	2 JAN 1330	103	7.	1.6	167.6
1 JAN 1615	18	0.	.1	167.0 *	2 JAN 0300	61	29.	4.3	168.5 *	2 JAN 1345	104	7.	1.5	167.6
1 JAN 1630	19	0.	.1	167.0 *	2 JAN 0315	62	27.	4.1	168.5 *	2 JAN 1400	105	6.	1.5	167.5
1 JAN 1645	20	0.	.1	167.0 *	2 JAN 0330	63	26.	3.9	168.4 *	2 JAN 1415	106	6.	1.4	167.5
1 JAN 1700	21	0.	.1	167.0 *	2 JAN 0345	64	25.	3.8	168.4 *	2 JAN 1430	107	6.	1.4	167.5
1 JAN 1715	22	0.	.1	167.0 *	2 JAN 0400	65	23.	3.7	168.3 *	2 JAN 1445	108	6.	1.3	167.5
1 JAN 1730	23	0.	.1	167.0 *	2 JAN 0415	66	22.	3.6	168.3 *	2 JAN 1500	109	5.	1.3	167.5
1 JAN 1745	24	0.	.1	167.0 *	2 JAN 0430	67	21.	3.5	168.2 *	2 JAN 1515	110	5.	1.2	167.5
1 JAN 1800	25	0.	.1	167.0 *	2 JAN 0445	68	21.	3.4	168.2 *	2 JAN 1530	111	5.	1.2	167.4
1 JAN 1815	26	0.	.1	167.0 *	2 JAN 0500	69	20.	3.3	168.2 *	2 JAN 1545	112	5.	1.1	167.4
1 JAN 1830	27	0.	.1	167.0 *	2 JAN 0515	70	19.	3.2	168.1 *	2 JAN 1600	113	5.	1.1	167.4
1 JAN 1845	28	0.	.1	167.0 *	2 JAN 0530	71	18.	3.1	168.1 *	2 JAN 1615	114	4.	1.1	167.4
1 JAN 1900	29	0.	.1	167.0 *	2 JAN 0545	72	18.	3.0	168.1 *	2 JAN 1630	115	4.	1.0	167.4
1 JAN 1915	30	0.	.1	167.0 *	2 JAN 0600	73	17.	2.9	168.1 *	2 JAN 1645	116	4.	1.0	167.4
1 JAN 1930	31	0.	.1	167.0 *	2 JAN 0615	74	16.	2.8	168.0 *	2 JAN 1700	117	4.	.9	167.3
1 JAN 1945	32	0.	.1	167.0 *	2 JAN 0630	75	16.	2.8	168.0 *	2 JAN 1715	118	4.	.9	167.3
1 JAN 2000	33	0.	.1	167.0 *	2 JAN 0645	76	15.	2.7	168.0 *	2 JAN 1730	119	4.	.9	167.3
1 JAN 2015	34	1.	.1	167.0 *	2 JAN 0700	77	15.	2.7	168.0 *	2 JAN 1745	120	4.	.8	167.3
1 JAN 2030	35	1.	.1	167.0 *	2 JAN 0715	78	14.	2.6	167.9 *	2 JAN 1800	121	3.	.8	167.3
1 JAN 2045	36	1.	.1	167.0 *	2 JAN 0730	79	14.	2.6	167.9 *	2 JAN 1815	122	3.	.8	167.3
1 JAN 2100	37	1.	.1	167.1 *	2 JAN 0745	80	14.	2.5	167.9 *	2 JAN 1830	123	3.	.7	167.3
1 JAN 2115	38	1.	.1	167.1 *	2 JAN 0800	81	13.	2.5	167.9 *	2 JAN 1845	124	3.	.7	167.3
1 JAN 2130	39	1.	.2	167.1 *	2 JAN 0815	82	13.	2.4	167.9 *	2 JAN 1900	125	3.	.7	167.3
1 JAN 2145	40	1.	.2	167.1 *	2 JAN 0830	83	13.	2.4	167.9 *	2 JAN 1915	126	3.	.7	167.2
1 JAN 2200	41	1.	.2	167.1 *	2 JAN 0845	84	12.	2.4	167.9 *	2 JAN 1930	127	3.	.6	167.2
1 JAN 2215	42	1.	.2	167.1 *	2 JAN 0900	85	12.	2.3	167.8 *	2 JAN 1945	128	3.	.6	167.2
1 JAN 2230	43	1.	.2	167.1 *	2 JAN 0915	86	12.	2.3	167.8 *	2 JAN 2000	129	3.	.6	167.2

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
+	35.	25.	11.	8.	8.
	(INCHES)	2.338	4.105	4.133	4.133
	(AC-FT)	12.	21.	22.	22.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	32.00-HR
+	(AC-FT)				
+	5.	4.	2.	1.	1.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	32.00-HR
+	(FEET)				
+	168.73	168.35	167.69	167.52	167.52

CUMULATIVE AREA = .10 SQ MI

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81 KK * *
 * BSN6 *
 * *

5 IN TIME DATA FOR INPUT TIME SERIES
 JXMIN 15 TIME INTERVAL IN MINUTES
 JXDATE 1JAN 4 STARTING DATE
 JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

82 BA SUBBASIN CHARACTERISTICS
 TAREA .01 SUBBASIN AREA

PRECIPITATION DATA

83 PB STORM 1.00 BASIN TOTAL PRECIPITATION

84 PI INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

94 LS SCS LOSS RATE
 STRTL .94 INITIAL ABSTRACTION
 CRVNBR 68.00 CURVE NUMBER
 RTIMP 10.00 PERCENT IMPERVIOUS AREA

95 UD SCS DIMENSIONLESS UNITGRAPH
 TLAG .53 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
13 END-OF-PERIOD ORDINATES

2.	5.	6.	4.	2.	1.	1.	0.	0.	0.
0.	0.	0.							

HYDROGRAPH AT STATION BSN6

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
1	JAN	1200	1	.00	.00	.00	0.	*		2	JAN	0415	66	.00	.00	.00	0.	
1	JAN	1215	2	.00	.00	.00	0.	*		2	JAN	0430	67	.00	.00	.00	0.	
1	JAN	1230	3	.00	.00	.00	0.	*		2	JAN	0445	68	.00	.00	.00	0.	
1	JAN	1245	4	.00	.00	.00	0.	*		2	JAN	0500	69	.00	.00	.00	0.	
1	JAN	1300	5	.00	.00	.00	0.	*		2	JAN	0515	70	.00	.00	.00	0.	
1	JAN	1315	6	.00	.00	.00	0.	*		2	JAN	0530	71	.00	.00	.00	0.	
1	JAN	1330	7	.00	.00	.00	0.	*		2	JAN	0545	72	.00	.00	.00	0.	
1	JAN	1345	8	.00	.00	.00	0.	*		2	JAN	0600	73	.00	.00	.00	0.	
1	JAN	1400	9	.00	.00	.00	0.	*		2	JAN	0615	74	.00	.00	.00	0.	
1	JAN	1415	10	.00	.00	.00	0.	*		2	JAN	0630	75	.00	.00	.00	0.	
1	JAN	1430	11	.00	.00	.00	0.	*		2	JAN	0645	76	.00	.00	.00	0.	
1	JAN	1445	12	.00	.00	.00	0.	*		2	JAN	0700	77	.00	.00	.00	0.	
1	JAN	1500	13	.00	.00	.00	0.	*		2	JAN	0715	78	.00	.00	.00	0.	
1	JAN	1515	14	.00	.00	.00	0.	*		2	JAN	0730	79	.00	.00	.00	0.	
1	JAN	1530	15	.00	.00	.00	0.	*		2	JAN	0745	80	.00	.00	.00	0.	
1	JAN	1545	16	.00	.00	.00	0.	*		2	JAN	0800	81	.00	.00	.00	0.	
1	JAN	1600	17	.00	.00	.00	0.	*		2	JAN	0815	82	.00	.00	.00	0.	
1	JAN	1615	18	.00	.00	.00	0.	*		2	JAN	0830	83	.00	.00	.00	0.	
1	JAN	1630	19	.00	.00	.00	0.	*		2	JAN	0845	84	.00	.00	.00	0.	
1	JAN	1645	20	.00	.00	.00	0.	*		2	JAN	0900	85	.00	.00	.00	0.	
1	JAN	1700	21	.00	.00	.00	0.	*		2	JAN	0915	86	.00	.00	.00	0.	
1	JAN	1715	22	.00	.00	.00	0.	*		2	JAN	0930	87	.00	.00	.00	0.	
1	JAN	1730	23	.00	.00	.00	0.	*		2	JAN	0945	88	.00	.00	.00	0.	
1	JAN	1745	24	.00	.00	.00	0.	*		2	JAN	1000	89	.00	.00	.00	0.	
1	JAN	1800	25	.00	.00	.00	0.	*		2	JAN	1015	90	.00	.00	.00	0.	
1	JAN	1815	26	.01	.00	.00	0.	*		2	JAN	1030	91	.00	.00	.00	0.	
1	JAN	1830	27	.01	.00	.00	0.	*		2	JAN	1045	92	.00	.00	.00	0.	
1	JAN	1845	28	.00	.00	.00	0.	*		2	JAN	1100	93	.00	.00	.00	0.	
1	JAN	1900	29	.01	.00	.00	0.	*		2	JAN	1115	94	.00	.00	.00	0.	
1	JAN	1915	30	.00	.00	.00	0.	*		2	JAN	1130	95	.00	.00	.00	0.	
1	JAN	1930	31	.01	.00	.00	0.	*		2	JAN	1145	96	.00	.00	.00	0.	
1	JAN	1945	32	.01	.00	.00	0.	*		2	JAN	1200	97	.00	.00	.00	0.	
1	JAN	2000	33	.00	.00	.00	0.	*		2	JAN	1215	98	.00	.00	.00	0.	
1	JAN	2015	34	.01	.01	.00	0.	*		2	JAN	1230	99	.00	.00	.00	0.	
1	JAN	2030	35	.01	.01	.00	0.	*		2	JAN	1245	100	.00	.00	.00	0.	
1	JAN	2045	36	.01	.01	.00	0.	*		2	JAN	1300	101	.00	.00	.00	0.	
1	JAN	2100	37	.01	.01	.00	0.	*		2	JAN	1315	102	.00	.00	.00	0.	
1	JAN	2115	38	.01	.01	.00	0.	*		2	JAN	1330	103	.00	.00	.00	0.	
1	JAN	2130	39	.01	.01	.00	0.	*		2	JAN	1345	104	.00	.00	.00	0.	
1	JAN	2145	40	.01	.01	.00	0.	*		2	JAN	1400	105	.00	.00	.00	0.	
1	JAN	2200	41	.01	.01	.00	0.	*		2	JAN	1415	106	.00	.00	.00	0.	
1	JAN	2215	42	.01	.01	.00	0.	*		2	JAN	1430	107	.00	.00	.00	0.	
1	JAN	2230	43	.01	.01	.00	0.	*		2	JAN	1445	108	.00	.00	.00	0.	
1	JAN	2245	44	.02	.01	.00	0.	*		2	JAN	1500	109	.00	.00	.00	0.	
1	JAN	2300	45	.02	.01	.00	0.	*		2	JAN	1515	110	.00	.00	.00	0.	
1	JAN	2315	46	.02	.02	.00	0.	*		2	JAN	1530	111	.00	.00	.00	0.	
1	JAN	2330	47	.02	.02	.00	0.	*		2	JAN	1545	112	.00	.00	.00	0.	
1	JAN	2345	48	.10	.09	.01	0.	*		2	JAN	1600	113	.00	.00	.00	0.	
2	JAN	0000	49	.28	.25	.03	0.	*		2	JAN	1615	114	.00	.00	.00	0.	
2	JAN	0015	50	.04	.03	.00	0.	*		2	JAN	1630	115	.00	.00	.00	0.	
2	JAN	0030	51	.04	.03	.00	0.	*		2	JAN	1645	116	.00	.00	.00	0.	
2	JAN	0045	52	.02	.02	.00	0.	*		2	JAN	1700	117	.00	.00	.00	0.	
2	JAN	0100	53	.02	.02	.00	0.	*		2	JAN	1715	118	.00	.00	.00	0.	
2	JAN	0115	54	.01	.01	.00	0.	*		2	JAN	1730	119	.00	.00	.00	0.	
2	JAN	0130	55	.01	.01	.00	0.	*		2	JAN	1745	120	.00	.00	.00	0.	
2	JAN	0145	56	.01	.01	.00	0.	*		2	JAN	1800	121	.00	.00	.00	0.	
2	JAN	0200	57	.01	.01	.00	0.	*		2	JAN	1815	122	.00	.00	.00	0.	

2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

*

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	32.00-HR
+	(CFS)	(HR)				
		(CFS)				
+	0.	12.50	0.	0.	0.	0.
		(INCHES)	.070	.100	.101	.101
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .01 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN6
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 1200	1	.00	.00	.00	0.	*	2 JAN 0415	66	.04	.01	.03	1.				
1 JAN 1215	2	.02	.02	.00	0.	*	2 JAN 0430	67	.03	.01	.03	1.				
1 JAN 1230	3	.02	.02	.00	0.	*	2 JAN 0445	68	.04	.01	.03	1.				
1 JAN 1245	4	.02	.01	.00	0.	*	2 JAN 0500	69	.03	.01	.03	1.				
1 JAN 1300	5	.02	.02	.00	0.	*	2 JAN 0515	70	.04	.01	.03	1.				
1 JAN 1315	6	.02	.02	.00	0.	*	2 JAN 0530	71	.03	.01	.03	1.				
1 JAN 1330	7	.02	.02	.00	0.	*	2 JAN 0545	72	.04	.01	.03	1.				
1 JAN 1345	8	.02	.01	.00	0.	*	2 JAN 0600	73	.03	.01	.03	1.				
1 JAN 1400	9	.02	.02	.00	0.	*	2 JAN 0615	74	.04	.01	.03	1.				
1 JAN 1415	10	.02	.02	.00	0.	*	2 JAN 0630	75	.03	.01	.03	1.				
1 JAN 1430	11	.03	.03	.00	0.	*	2 JAN 0645	76	.03	.01	.03	1.				
1 JAN 1445	12	.02	.02	.00	0.	*	2 JAN 0700	77	.04	.01	.03	1.				
1 JAN 1500	13	.02	.02	.00	0.	*	2 JAN 0715	78	.03	.01	.03	1.				
1 JAN 1515	14	.02	.02	.00	0.	*	2 JAN 0730	79	.04	.01	.03	1.				
1 JAN 1530	15	.03	.03	.00	0.	*	2 JAN 0745	80	.03	.01	.03	1.				
1 JAN 1545	16	.02	.02	.00	0.	*	2 JAN 0800	81	.04	.01	.03	1.				
1 JAN 1600	17	.02	.02	.00	0.	*	2 JAN 0815	82	.02	.00	.02	1.				
1 JAN 1615	18	.03	.03	.00	0.	*	2 JAN 0830	83	.02	.00	.02	1.				
1 JAN 1630	19	.03	.03	.00	0.	*	2 JAN 0845	84	.02	.00	.02	0.				
1 JAN 1645	20	.03	.03	.00	0.	*	2 JAN 0900	85	.02	.00	.02	0.				
1 JAN 1700	21	.03	.03	.00	0.	*	2 JAN 0915	86	.02	.00	.02	0.				
1 JAN 1715	22	.03	.03	.00	0.	*	2 JAN 0930	87	.02	.00	.02	0.				
1 JAN 1730	23	.03	.03	.00	0.	*	2 JAN 0945	88	.02	.00	.02	0.				
1 JAN 1745	24	.03	.03	.00	0.	*	2 JAN 1000	89	.02	.00	.02	0.				
1 JAN 1800	25	.03	.03	.00	0.	*	2 JAN 1015	90	.02	.00	.02	0.				

1 JAN 1815	26	.04	.04	.00	0.	*	2 JAN 1030	91	.02	.00	.02	0.
1 JAN 1830	27	.04	.04	.00	0.	*	2 JAN 1045	92	.02	.00	.02	0.
1 JAN 1845	28	.04	.04	.00	0.	*	2 JAN 1100	93	.02	.00	.02	0.
1 JAN 1900	29	.04	.04	.00	0.	*	2 JAN 1115	94	.02	.00	.02	0.
1 JAN 1915	30	.04	.04	.00	0.	*	2 JAN 1130	95	.02	.00	.02	0.
1 JAN 1930	31	.04	.04	.00	0.	*	2 JAN 1145	96	.02	.00	.02	0.
1 JAN 1945	32	.04	.04	.00	0.	*	2 JAN 1200	97	.02	.00	.02	0.
1 JAN 2000	33	.04	.04	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.05	.05	.01	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.05	.05	.01	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.05	.04	.01	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.05	.05	.01	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.06	.05	.01	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.06	.05	.01	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.07	.03	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	1.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	1.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	1.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	2.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	5.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	11.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	12.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	9.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	6.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	4.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	3.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	3.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	2.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	2.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	1.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	1.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	1.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	1.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	1.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	1.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	1.	*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+ (CFS)	(HR)				
		(CFS)			
+ 12.	12.50	3.	1.	1.	1.
		(INCHES)	3.470	4.433	4.441
		(AC-FT)	1.	2.	2.

CUMULATIVE AREA = .01 SQ MI

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*
* RTE6 *
*

97 KO OUTPUT CONTROL VARIABLES
IPRNT 5 PRINT CONTROL
IPLOT 5 PLOT CONTROL
QSCAL 0. HYDROGRAPH PLOT SCALE

*** **

*
* OFFST *
*

99 KK
5 IN TIME DATA FOR INPUT TIME SERIES
JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

100 BA SUBBASIN CHARACTERISTICS
TAREA .36 SUBBASIN AREA

PRECIPITATION DATA

101 PB STORM 1.00 BASIN TOTAL PRECIPITATION

102 PI INCREMENTAL PRECIPITATION PATTERN
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .01 .01 .00 .01 .00 .01
.01 .00 .01 .01 .01 .01 .01 .01 .01 .01
.01 .01 .02 .02 .02 .02 .10 .28 .04 .04
.02 .02 .01 .01 .01 .01 .01 .01 .01 .01
.01 .01 .01 .01 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00

112 LS SCS LOSS RATE
STRTL .86 INITIAL ABSTRACTION
CRVNB 70.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

UD SCS DIMENSIONLESS UNITGRAPH
TLAG 1.58 LAG

34 END-OF-PERIOD ORDINATES

6.	19.	38.	65.	88.	100.	102.	96.	86.	72.
55.	42.	33.	26.	21.	16.	13.	10.	8.	6.
5.	4.	3.	2.	2.	1.	1.	1.	1.	1.
0.	0.	0.	0.						

HYDROGRAPH AT STATION OFFST

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	1.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	1.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	1.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	1.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	1.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	1.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	1.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	1.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	1.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	1.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	1.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	1.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	1.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	1.
1	JAN	1530	15	.00	.00	.00	0.	*	2	JAN	0745	80	.00	.00	.00	1.
1	JAN	1545	16	.00	.00	.00	0.	*	2	JAN	0800	81	.00	.00	.00	1.
1	JAN	1600	17	.00	.00	.00	0.	*	2	JAN	0815	82	.00	.00	.00	1.
1	JAN	1615	18	.00	.00	.00	0.	*	2	JAN	0830	83	.00	.00	.00	1.
1	JAN	1630	19	.00	.00	.00	0.	*	2	JAN	0845	84	.00	.00	.00	1.
1	JAN	1645	20	.00	.00	.00	0.	*	2	JAN	0900	85	.00	.00	.00	1.
1	JAN	1700	21	.00	.00	.00	0.	*	2	JAN	0915	86	.00	.00	.00	1.
1	JAN	1715	22	.00	.00	.00	0.	*	2	JAN	0930	87	.00	.00	.00	0.
1	JAN	1730	23	.00	.00	.00	0.	*	2	JAN	0945	88	.00	.00	.00	0.
1	JAN	1745	24	.00	.00	.00	0.	*	2	JAN	1000	89	.00	.00	.00	0.
1	JAN	1800	25	.00	.00	.00	0.	*	2	JAN	1015	90	.00	.00	.00	0.
1	JAN	1815	26	.01	.00	.00	0.	*	2	JAN	1030	91	.00	.00	.00	0.
1	JAN	1830	27	.01	.00	.00	0.	*	2	JAN	1045	92	.00	.00	.00	0.
1	JAN	1845	28	.00	.00	.00	0.	*	2	JAN	1100	93	.00	.00	.00	0.
1	JAN	1900	29	.01	.00	.00	0.	*	2	JAN	1115	94	.00	.00	.00	0.
1	JAN	1915	30	.00	.00	.00	0.	*	2	JAN	1130	95	.00	.00	.00	0.
1	JAN	1930	31	.01	.00	.00	0.	*	2	JAN	1145	96	.00	.00	.00	0.
1	JAN	1945	32	.01	.00	.00	0.	*	2	JAN	1200	97	.00	.00	.00	0.
1	JAN	2000	33	.00	.00	.00	0.	*	2	JAN	1215	98	.00	.00	.00	0.
1	JAN	2015	34	.01	.01	.00	0.	*	2	JAN	1230	99	.00	.00	.00	0.
1	JAN	2030	35	.01	.01	.00	0.	*	2	JAN	1245	100	.00	.00	.00	0.
1	JAN	2045	36	.01	.01	.00	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.01	.01	.00	0.	*	2	JAN	1315	102	.00	.00	.00	0.
1	JAN	2115	38	.01	.01	.00	0.	*	2	JAN	1330	103	.00	.00	.00	0.
1	JAN	2130	39	.01	.01	.00	1.	*	2	JAN	1345	104	.00	.00	.00	0.
1	JAN	2145	40	.01	.01	.00	1.	*	2	JAN	1400	105	.00	.00	.00	0.
1	JAN	2200	41	.01	.01	.00	1.	*	2	JAN	1415	106	.00	.00	.00	0.
1	JAN	2215	42	.01	.01	.00	1.	*	2	JAN	1430	107	.00	.00	.00	0.
1	JAN	2230	43	.01	.01	.00	1.	*	2	JAN	1445	108	.00	.00	.00	0.
1	JAN	2245	44	.02	.01	.00	1.	*	2	JAN	1500	109	.00	.00	.00	0.
1	JAN	2300	45	.02	.01	.00	1.	*	2	JAN	1515	110	.00	.00	.00	0.
1	JAN	2315	46	.02	.02	.00	1.	*	2	JAN	1530	111	.00	.00	.00	0.

1 JAN 2330	47	.02	.02	.00	1.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	1.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	1.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	2.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	3.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	4.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	5.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	5.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	5.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	5.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	5.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	4.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	4.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	3.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	3.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	2.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	2.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	2.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	1.	*						
						*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
	(HR)				
	(CFS)				
+	5.	13.50	3.	1.	1.
	(INCHES)	.069	.103	.104	.104
	(AC-FT)	1.	2.	2.	2.

CUMULATIVE AREA = .36 SQ MI

HYDROGRAPH AT STATION OFFST PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 1200	1	.00	.00	.00	0.	*	2 JAN 0415	66	.04	.01	.03	77.				
1 JAN 1215	2	.02	.02	.00	0.	*	2 JAN 0430	67	.03	.00	.03	70.				
1 JAN 1230	3	.02	.02	.00	0.	*	2 JAN 0445	68	.04	.01	.03	64.				
1 JAN 1245	4	.02	.01	.00	0.	*	2 JAN 0500	69	.03	.00	.03	58.				
1 JAN 1300	5	.02	.02	.00	0.	*	2 JAN 0515	70	.04	.01	.03	53.				
1 JAN 1315	6	.02	.02	.00	0.	*	2 JAN 0530	71	.03	.00	.03	49.				
1 JAN 1330	7	.02	.02	.00	1.	*	2 JAN 0545	72	.04	.01	.03	45.				
1 JAN 1345	8	.02	.01	.00	1.	*	2 JAN 0600	73	.03	.00	.03	41.				
1 JAN 1400	9	.02	.02	.00	1.	*	2 JAN 0615	74	.04	.01	.03	39.				
1 JAN 1415	10	.02	.02	.00	1.	*	2 JAN 0630	75	.03	.00	.03	36.				
1 JAN 1430	11	.03	.03	.00	1.	*	2 JAN 0645	76	.03	.00	.03	34.				
1 JAN 1445	12	.02	.02	.00	2.	*	2 JAN 0700	77	.04	.01	.03	33.				
1 JAN 1500	13	.02	.02	.00	2.	*	2 JAN 0715	78	.03	.00	.03	32.				
1 JAN 1515	14	.02	.02	.00	2.	*	2 JAN 0730	79	.04	.01	.03	31.				
1 JAN 1530	15	.03	.03	.00	2.	*	2 JAN 0745	80	.03	.00	.03	30.				
1 JAN 1545	16	.02	.02	.00	2.	*	2 JAN 0800	81	.04	.01	.03	29.				

1 JAN 1600	17	.02	.02	.00	2.	*	2 JAN 0815	82	.02	.00	.02	29.
1 JAN 1615	18	.03	.03	.00	2.	*	2 JAN 0830	83	.02	.00	.02	28.
1 JAN 1630	19	.03	.03	.00	2.	*	2 JAN 0845	84	.02	.00	.02	28.
1 JAN 1645	20	.03	.03	.00	2.	*	2 JAN 0900	85	.02	.00	.02	27.
1 JAN 1700	21	.03	.03	.00	2.	*	2 JAN 0915	86	.02	.00	.02	26.
1 JAN 1715	22	.03	.03	.00	2.	*	2 JAN 0930	87	.02	.00	.02	25.
1 JAN 1730	23	.03	.03	.00	2.	*	2 JAN 0945	88	.02	.00	.02	24.
1 JAN 1745	24	.03	.03	.00	3.	*	2 JAN 1000	89	.02	.00	.02	23.
1 JAN 1800	25	.03	.03	.00	3.	*	2 JAN 1015	90	.02	.00	.02	22.
1 JAN 1815	26	.04	.04	.00	3.	*	2 JAN 1030	91	.02	.00	.02	21.
1 JAN 1830	27	.04	.04	.00	3.	*	2 JAN 1045	92	.02	.00	.02	21.
1 JAN 1845	28	.04	.04	.00	3.	*	2 JAN 1100	93	.02	.00	.02	20.
1 JAN 1900	29	.04	.04	.00	3.	*	2 JAN 1115	94	.02	.00	.02	20.
1 JAN 1915	30	.04	.04	.00	3.	*	2 JAN 1130	95	.02	.00	.02	20.
1 JAN 1930	31	.04	.04	.00	3.	*	2 JAN 1145	96	.02	.00	.02	20.
1 JAN 1945	32	.04	.03	.00	3.	*	2 JAN 1200	97	.02	.00	.02	19.
1 JAN 2000	33	.04	.03	.00	3.	*	2 JAN 1215	98	.00	.00	.00	19.
1 JAN 2015	34	.05	.05	.01	3.	*	2 JAN 1230	99	.00	.00	.00	19.
1 JAN 2030	35	.05	.05	.01	4.	*	2 JAN 1245	100	.00	.00	.00	18.
1 JAN 2045	36	.05	.04	.01	4.	*	2 JAN 1300	101	.00	.00	.00	16.
1 JAN 2100	37	.05	.04	.01	4.	*	2 JAN 1315	102	.00	.00	.00	15.
1 JAN 2115	38	.06	.05	.01	5.	*	2 JAN 1330	103	.00	.00	.00	13.
1 JAN 2130	39	.06	.05	.02	5.	*	2 JAN 1345	104	.00	.00	.00	10.
1 JAN 2145	40	.07	.05	.02	6.	*	2 JAN 1400	105	.00	.00	.00	8.
1 JAN 2200	41	.07	.05	.02	7.	*	2 JAN 1415	106	.00	.00	.00	7.
1 JAN 2215	42	.09	.06	.03	8.	*	2 JAN 1430	107	.00	.00	.00	5.
1 JAN 2230	43	.09	.06	.03	10.	*	2 JAN 1445	108	.00	.00	.00	4.
1 JAN 2245	44	.12	.08	.04	11.	*	2 JAN 1500	109	.00	.00	.00	3.
1 JAN 2300	45	.12	.07	.05	14.	*	2 JAN 1515	110	.00	.00	.00	3.
1 JAN 2315	46	.19	.11	.08	16.	*	2 JAN 1530	111	.00	.00	.00	2.
1 JAN 2330	47	.19	.10	.09	20.	*	2 JAN 1545	112	.00	.00	.00	2.
1 JAN 2345	48	.81	.37	.44	27.	*	2 JAN 1600	113	.00	.00	.00	1.
2 JAN 0000	49	2.15	.64	1.51	46.	*	2 JAN 1615	114	.00	.00	.00	1.
2 JAN 0015	50	.28	.06	.22	78.	*	2 JAN 1630	115	.00	.00	.00	1.
2 JAN 0030	51	.28	.06	.22	125.	*	2 JAN 1645	116	.00	.00	.00	1.
2 JAN 0045	52	.15	.03	.12	182.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	231.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	262.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	273.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	268.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.01	.06	251.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	225.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.05	193.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	165.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.05	143.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	125.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.05	109.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	96.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.05	85.	*						
						*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.16, TOTAL EXCESS = 4.64

 FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+ (CFS)	(HR)				
		(CFS)			
+ 273.	13.50	136.	45.	34.	34.
		(INCHES)	3.529	4.622	4.644

(AC-FT) 68. 88. 89. 89.

CUMULATIVE AREA = .36 SQ MI

*** **

114 KK * BSN8 *

5 IN TIME DATA FOR INPUT TIME SERIES
JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

115 BA SUBBASIN CHARACTERISTICS
TAREA .03 SUBBASIN AREA

PRECIPITATION DATA

116 PB STORM 1.00 BASIN TOTAL PRECIPITATION

PI INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

127 LS SCS LOSS RATE
STRTL .94 INITIAL ABSTRACTION
CRVNBR 68.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

128 UD SCS DIMENSIONLESS UNITGRAPH
TLAG .49 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
12 END-OF-PERIOD ORDINATES

7. 20. 20. 11. 6. 3. 2. 1. 0. 0.
0. 0.

HYDROGRAPH AT STATION BSN8

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*****
*
DA MON HRMN ORD RAIN LOSS EXCESS COMP Q *
*
1 JAN 1200 1 .00 .00 .00 0. *
1 JAN 1215 2 .00 .00 .00 0. *
1 JAN 1230 3 .00 .00 .00 0. *
1 JAN 1245 4 .00 .00 .00 0. *
1 JAN 1300 5 .00 .00 .00 0. *
1 JAN 1315 6 .00 .00 .00 0. *
1 JAN 1330 7 .00 .00 .00 0. *
1 JAN 1345 8 .00 .00 .00 0. *
1 JAN 1400 9 .00 .00 .00 0. *
1 JAN 1415 10 .00 .00 .00 0. *
1 JAN 1430 11 .00 .00 .00 0. *
1 JAN 1445 12 .00 .00 .00 0. *
1 JAN 1500 13 .00 .00 .00 0. *
1 JAN 1515 14 .00 .00 .00 0. *
1 JAN 1530 15 .00 .00 .00 0. *
1 JAN 1545 16 .00 .00 .00 0. *
1 JAN 1600 17 .00 .00 .00 0. *
1 JAN 1615 18 .00 .00 .00 0. *
1 JAN 1630 19 .00 .00 .00 0. *
1 JAN 1645 20 .00 .00 .00 0. *
1 JAN 1700 21 .00 .00 .00 0. *
1 JAN 1715 22 .00 .00 .00 0. *
1 JAN 1730 23 .00 .00 .00 0. *
1 JAN 1745 24 .00 .00 .00 0. *
1 JAN 1800 25 .00 .00 .00 0. *
1 JAN 1815 26 .01 .00 .00 0. *
1 JAN 1830 27 .01 .00 .00 0. *
1 JAN 1845 28 .00 .00 .00 0. *
1 JAN 1900 29 .01 .00 .00 0. *
1 JAN 1915 30 .00 .00 .00 0. *
1 JAN 1930 31 .01 .00 .00 0. *
1 JAN 1945 32 .01 .00 .00 0. *
1 JAN 2000 33 .00 .00 .00 0. *
1 JAN 2015 34 .01 .01 .00 0. *
1 JAN 2030 35 .01 .01 .00 0. *
1 JAN 2045 36 .01 .01 .00 0. *
1 JAN 2100 37 .01 .01 .00 0. *
1 JAN 2115 38 .01 .01 .00 0. *
1 JAN 2130 39 .01 .01 .00 0. *
1 JAN 2145 40 .01 .01 .00 0. *
1 JAN 2200 41 .01 .01 .00 0. *
1 JAN 2215 42 .01 .01 .00 0. *
1 JAN 2230 43 .01 .01 .00 0. *
1 JAN 2245 44 .02 .01 .00 0. *
1 JAN 2300 45 .02 .01 .00 0. *
1 JAN 2315 46 .02 .02 .00 0. *
1 JAN 2330 47 .02 .02 .00 0. *
1 JAN 2345 48 .10 .09 .01 0. *
2 JAN 0000 49 .28 .25 .03 0. *
2 JAN 0015 50 .04 .03 .00 1. *
2 JAN 0030 51 .04 .03 .00 1. *
2 JAN 0045 52 .02 .02 .00 1. *
2 JAN 0100 53 .02 .02 .00 0. *
*
DA MON HRMN ORD RAIN LOSS EXCESS COMP Q
*
2 JAN 0415 66 .00 .00 .00 0.
2 JAN 0430 67 .00 .00 .00 0.
2 JAN 0445 68 .00 .00 .00 0.
2 JAN 0500 69 .00 .00 .00 0.
2 JAN 0515 70 .00 .00 .00 0.
2 JAN 0530 71 .00 .00 .00 0.
2 JAN 0545 72 .00 .00 .00 0.
2 JAN 0600 73 .00 .00 .00 0.
2 JAN 0615 74 .00 .00 .00 0.
2 JAN 0630 75 .00 .00 .00 0.
2 JAN 0645 76 .00 .00 .00 0.
2 JAN 0700 77 .00 .00 .00 0.
2 JAN 0715 78 .00 .00 .00 0.
2 JAN 0730 79 .00 .00 .00 0.
2 JAN 0745 80 .00 .00 .00 0.
2 JAN 0800 81 .00 .00 .00 0.
2 JAN 0815 82 .00 .00 .00 0.
2 JAN 0830 83 .00 .00 .00 0.
2 JAN 0845 84 .00 .00 .00 0.
2 JAN 0900 85 .00 .00 .00 0.
2 JAN 0915 86 .00 .00 .00 0.
2 JAN 0930 87 .00 .00 .00 0.
2 JAN 0945 88 .00 .00 .00 0.
2 JAN 1000 89 .00 .00 .00 0.
2 JAN 1015 90 .00 .00 .00 0.
2 JAN 1030 91 .00 .00 .00 0.
2 JAN 1045 92 .00 .00 .00 0.
2 JAN 1100 93 .00 .00 .00 0.
2 JAN 1115 94 .00 .00 .00 0.
2 JAN 1130 95 .00 .00 .00 0.
2 JAN 1145 96 .00 .00 .00 0.
2 JAN 1200 97 .00 .00 .00 0.
2 JAN 1215 98 .00 .00 .00 0.
2 JAN 1230 99 .00 .00 .00 0.
2 JAN 1245 100 .00 .00 .00 0.
2 JAN 1300 101 .00 .00 .00 0.
2 JAN 1315 102 .00 .00 .00 0.
2 JAN 1330 103 .00 .00 .00 0.
2 JAN 1345 104 .00 .00 .00 0.
2 JAN 1400 105 .00 .00 .00 0.
2 JAN 1415 106 .00 .00 .00 0.
2 JAN 1430 107 .00 .00 .00 0.
2 JAN 1445 108 .00 .00 .00 0.
2 JAN 1500 109 .00 .00 .00 0.
2 JAN 1515 110 .00 .00 .00 0.
2 JAN 1530 111 .00 .00 .00 0.
2 JAN 1545 112 .00 .00 .00 0.
2 JAN 1600 113 .00 .00 .00 0.
2 JAN 1615 114 .00 .00 .00 0.
2 JAN 1630 115 .00 .00 .00 0.
2 JAN 1645 116 .00 .00 .00 0.
2 JAN 1700 117 .00 .00 .00 0.
2 JAN 1715 118 .00 .00 .00 0.

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2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
	(HR)				
	(CFS)				
+	1. 12.25	0.	0.	0.	0.
	(INCHES)	.070	.100	.101	.101
	(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .03 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN8
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1 JAN 1200	1	.00	.00	.00	0.	*			2 JAN 0415	66	.04	.01	.03	3.		
1 JAN 1215	2	.02	.02	.00	0.	*			2 JAN 0430	67	.03	.01	.03	3.		
1 JAN 1230	3	.02	.02	.00	0.	*			2 JAN 0445	68	.04	.01	.03	2.		
1 JAN 1245	4	.02	.01	.00	0.	*			2 JAN 0500	69	.03	.01	.03	2.		
1 JAN 1300	5	.02	.02	.00	0.	*			2 JAN 0515	70	.04	.01	.03	2.		
1 JAN 1315	6	.02	.02	.00	0.	*			2 JAN 0530	71	.03	.01	.03	2.		
1 JAN 1330	7	.02	.02	.00	0.	*			2 JAN 0545	72	.04	.01	.03	2.		
1 JAN 1345	8	.02	.01	.00	0.	*			2 JAN 0600	73	.03	.01	.03	2.		
1 JAN 1400	9	.02	.02	.00	0.	*			2 JAN 0615	74	.04	.01	.03	2.		
1 JAN 1415	10	.02	.02	.00	0.	*			2 JAN 0630	75	.03	.01	.03	2.		
1 JAN 1430	11	.03	.03	.00	0.	*			2 JAN 0645	76	.03	.01	.03	2.		
1 JAN 1445	12	.02	.02	.00	0.	*			2 JAN 0700	77	.04	.01	.03	2.		
1 JAN 1500	13	.02	.02	.00	0.	*			2 JAN 0715	78	.03	.01	.03	2.		
1 JAN 1515	14	.02	.02	.00	0.	*			2 JAN 0730	79	.04	.01	.03	2.		
1 JAN 1530	15	.03	.03	.00	0.	*			2 JAN 0745	80	.03	.01	.03	2.		
1 JAN 1545	16	.02	.02	.00	0.	*			2 JAN 0800	81	.04	.01	.03	2.		
1 JAN 1600	17	.02	.02	.00	0.	*			2 JAN 0815	82	.02	.00	.02	2.		
1 JAN 1615	18	.03	.03	.00	0.	*			2 JAN 0830	83	.02	.00	.02	2.		
1 JAN 1630	19	.03	.03	.00	0.	*			2 JAN 0845	84	.02	.00	.02	2.		
1 JAN 1645	20	.03	.03	.00	0.	*			2 JAN 0900	85	.02	.00	.02	2.		
1 JAN 1700	21	.03	.03	.00	0.	*			2 JAN 0915	86	.02	.00	.02	1.		

1 JAN 1715	22	.03	.03	.00	0.	*	2 JAN 0930	87	.02	.00	.02	1.
1 JAN 1730	23	.03	.03	.00	0.	*	2 JAN 0945	88	.02	.00	.02	1.
1 JAN 1745	24	.03	.03	.00	0.	*	2 JAN 1000	89	.02	.00	.02	1.
1 JAN 1800	25	.03	.03	.00	0.	*	2 JAN 1015	90	.02	.00	.02	1.
1 JAN 1815	26	.04	.04	.00	0.	*	2 JAN 1030	91	.02	.00	.02	1.
1 JAN 1830	27	.04	.04	.00	0.	*	2 JAN 1045	92	.02	.00	.02	1.
1 JAN 1845	28	.04	.04	.00	0.	*	2 JAN 1100	93	.02	.00	.02	1.
1 JAN 1900	29	.04	.04	.00	0.	*	2 JAN 1115	94	.02	.00	.02	1.
1 JAN 1915	30	.04	.04	.00	0.	*	2 JAN 1130	95	.02	.00	.02	1.
1 JAN 1930	31	.04	.04	.00	0.	*	2 JAN 1145	96	.02	.00	.02	1.
1 JAN 1945	32	.04	.04	.00	0.	*	2 JAN 1200	97	.02	.00	.02	1.
1 JAN 2000	33	.04	.04	.00	0.	*	2 JAN 1215	98	.00	.00	.00	1.
1 JAN 2015	34	.05	.05	.01	0.	*	2 JAN 1230	99	.00	.00	.00	1.
1 JAN 2030	35	.05	.05	.01	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.05	.04	.01	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.05	.05	.01	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.06	.05	.01	1.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.06	.05	.01	1.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	1.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.07	.03	1.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	2.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	2.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	3.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	4.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	7.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	21.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	40.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	40.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	29.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	19.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	14.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	10.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	8.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	7.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	6.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	5.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	4.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	4.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	3.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	3.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	3.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	3.	*						

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+					
+	40.	10.	3.	2.	2.
	12.25	10.	3.	2.	2.
		3.472	4.433	4.441	4.441
	(INCHES)				
	(AC-FT)	5.	6.	6.	6.

CUMULATIVE AREA = .03 SQ MI

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129 KK 608P5

130 HC HYDROGRAPH COMBINATION
ICOMP 4 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION 608P5
SUM OF 4 HYDROGRAPHS
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
1	JAN	1200	1	0.	*	1	JAN	2015	34	4.	*	2	JAN	0430	67	95.	*	2	JAN	1245	100	27.
1	JAN	1215	2	0.	*	1	JAN	2030	35	4.	*	2	JAN	0445	68	88.	*	2	JAN	1300	101	25.
1	JAN	1230	3	0.	*	1	JAN	2045	36	5.	*	2	JAN	0500	69	81.	*	2	JAN	1315	102	22.
1	JAN	1245	4	0.	*	1	JAN	2100	37	5.	*	2	JAN	0515	70	75.	*	2	JAN	1330	103	20.
1	JAN	1300	5	0.	*	1	JAN	2115	38	6.	*	2	JAN	0530	71	70.	*	2	JAN	1345	104	17.
1	JAN	1315	6	1.	*	1	JAN	2130	39	7.	*	2	JAN	0545	72	65.	*	2	JAN	1400	105	15.
1	JAN	1330	7	1.	*	1	JAN	2145	40	8.	*	2	JAN	0600	73	61.	*	2	JAN	1415	106	13.
1	JAN	1345	8	1.	*	1	JAN	2200	41	9.	*	2	JAN	0615	74	58.	*	2	JAN	1430	107	11.
1	JAN	1400	9	1.	*	1	JAN	2215	42	10.	*	2	JAN	0630	75	55.	*	2	JAN	1445	108	10.
1	JAN	1415	10	2.	*	1	JAN	2230	43	12.	*	2	JAN	0645	76	52.	*	2	JAN	1500	109	9.
1	JAN	1430	11	2.	*	1	JAN	2245	44	14.	*	2	JAN	0700	77	50.	*	2	JAN	1515	110	8.
1	JAN	1445	12	2.	*	1	JAN	2300	45	17.	*	2	JAN	0715	78	49.	*	2	JAN	1530	111	7.
1	JAN	1500	13	2.	*	1	JAN	2315	46	21.	*	2	JAN	0730	79	47.	*	2	JAN	1545	112	6.
1	JAN	1515	14	2.	*	1	JAN	2330	47	26.	*	2	JAN	0745	80	46.	*	2	JAN	1600	113	6.
1	JAN	1530	15	2.	*	1	JAN	2345	48	36.	*	2	JAN	0800	81	45.	*	2	JAN	1615	114	5.
1	JAN	1545	16	2.	*	2	JAN	0000	49	71.	*	2	JAN	0815	82	44.	*	2	JAN	1630	115	5.
1	JAN	1600	17	3.	*	2	JAN	0015	50	124.	*	2	JAN	0830	83	43.	*	2	JAN	1645	116	5.
1	JAN	1615	18	3.	*	2	JAN	0030	51	176.	*	2	JAN	0845	84	42.	*	2	JAN	1700	117	4.
1	JAN	1630	19	3.	*	2	JAN	0045	52	234.	*	2	JAN	0900	85	41.	*	2	JAN	1715	118	4.
1	JAN	1645	20	3.	*	2	JAN	0100	53	286.	*	2	JAN	0915	86	40.	*	2	JAN	1730	119	4.
1	JAN	1700	21	3.	*	2	JAN	0115	54	318.	*	2	JAN	0930	87	38.	*	2	JAN	1745	120	4.
1	JAN	1715	22	3.	*	2	JAN	0130	55	326.	*	2	JAN	0945	88	37.	*	2	JAN	1800	121	4.
1	JAN	1730	23	3.	*	2	JAN	0145	56	317.	*	2	JAN	1000	89	36.	*	2	JAN	1815	122	3.
1	JAN	1745	24	3.	*	2	JAN	0200	57	297.	*	2	JAN	1015	90	34.	*	2	JAN	1830	123	3.
1	JAN	1800	25	3.	*	2	JAN	0215	58	268.	*	2	JAN	1030	91	33.	*	2	JAN	1845	124	3.
1	JAN	1815	26	3.	*	2	JAN	0230	59	232.	*	2	JAN	1045	92	32.	*	2	JAN	1900	125	3.
1	JAN	1830	27	3.	*	2	JAN	0245	60	202.	*	2	JAN	1100	93	32.	*	2	JAN	1915	126	3.
1	JAN	1845	28	4.	*	2	JAN	0300	61	177.	*	2	JAN	1115	94	31.	*	2	JAN	1930	127	3.
1	JAN	1900	29	4.	*	2	JAN	0315	62	157.	*	2	JAN	1130	95	31.	*	2	JAN	1945	128	3.
1	JAN	1915	30	4.	*	2	JAN	0330	63	140.	*	2	JAN	1145	96	30.	*	2	JAN	2000	129	3.
1	JAN	1930	31	4.	*	2	JAN	0345	64	125.	*	2	JAN	1200	97	30.	*					
1	JAN	1945	32	4.	*	2	JAN	0400	65	113.	*	2	JAN	1215	98	29.	*					
1	JAN	2000	33	4.	*	2	JAN	0415	66	103.	*	2	JAN	1230	99	28.	*					

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW				
		6-HR	24-HR	72-HR	32.00-HR	
326.	13.50	172.	59.	45.	45.	
		(INCHES)	3.258	4.475	4.528	4.528
		(AC-FT)	85.	117.	119.	119.

CUMULATIVE AREA = .49 SQ MI

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131 KK

* *
* POND4 *
* *

HYDROGRAPH ROUTING DATA

132 RS

STORAGE ROUTING

NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 158.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

133 SA

AREA 3.1 3.2 3.4 3.6

134 SE

ELEVATION 166.00 167.00 168.00 169.00

135 SL

LOW-LEVEL OUTLET

ELEVL 158.00 ELEVATION AT CENTER OF OUTLET
CAREA 14.73 CROSS-SECTIONAL AREA
COQL .60 COEFFICIENT
EXPL .50 EXPONENT OF HEAD

136 SS

SPILLWAY

CREL 167.00 SPILLWAY CREST ELEVATION
SPWID .00 SPILLWAY WIDTH
COQW .00 WEIR COEFFICIENT
EXPW 1.50 EXPONENT OF HEAD

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	3.15	6.48	9.99
ELEVATION	166.00	167.00	168.00	169.00

COMPUTED OUTFLOW-ELEVATION DATA

OUTFLOW	.00	201.76	203.06	204.38	205.71	207.06	208.43	209.81	211.22	212.64
ELEVATION	166.00	166.10	166.21	166.31	166.42	166.53	166.65	166.76	166.88	167.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	.32	.64	.97	1.31	1.66	2.02	2.38	2.76	3.15
OUTFLOW	200.48	201.76	203.06	204.38	205.71	207.06	208.43	209.81	211.22	212.64
ELEVATION	166.00	166.10	166.21	166.31	166.42	166.53	166.65	166.76	166.88	167.00

STORAGE	6.48	9.99
OUTFLOW	224.14	235.08
ELEVATION	168.00	169.00

HYDROGRAPH AT STATION POND4
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	JAN	1200	1	0.	2.1	166.0	1	JAN	2245	44	200.	-2.1	166.0	2	JAN	0930	87	200.	-2.1	166.0
1	JAN	1215	2	200.	.0	166.0	1	JAN	2300	45	200.	-2.1	166.0	2	JAN	0945	88	200.	-2.1	166.0
1	JAN	1230	3	200.	-2.1	166.0	1	JAN	2315	46	200.	-2.1	166.0	2	JAN	1000	89	200.	-2.1	166.0
1	JAN	1245	4	200.	-2.1	166.0	1	JAN	2330	47	200.	-2.1	166.0	2	JAN	1015	90	200.	-2.1	166.0
1	JAN	1300	5	200.	-2.1	166.0	1	JAN	2345	48	200.	-2.1	166.0	2	JAN	1030	91	200.	-2.1	166.0
1	JAN	1315	6	200.	-2.1	166.0	2	JAN	0000	49	200.	-2.1	166.0	2	JAN	1045	92	200.	-2.1	166.0
1	JAN	1330	7	200.	-2.1	166.0	2	JAN	0015	50	200.	-2.1	166.0	2	JAN	1100	93	200.	-2.1	166.0
1	JAN	1345	8	200.	-2.1	166.0	2	JAN	0030	51	200.	-2.1	166.0	2	JAN	1115	94	200.	-2.1	166.0
1	JAN	1400	9	200.	-2.1	166.0	2	JAN	0045	52	200.	-2.0	166.0	2	JAN	1130	95	200.	-2.1	166.0
1	JAN	1415	10	200.	-2.1	166.0	2	JAN	0100	53	200.	-.7	166.0	2	JAN	1145	96	200.	-2.1	166.0
1	JAN	1430	11	200.	-2.1	166.0	2	JAN	0115	54	206.	1.3	166.4	2	JAN	1200	97	200.	-2.1	166.0
1	JAN	1445	12	200.	-2.1	166.0	2	JAN	0130	55	214.	3.6	167.1	2	JAN	1215	98	200.	-2.1	166.0
1	JAN	1500	13	200.	-2.1	166.0	2	JAN	0145	56	222.	5.8	167.8	2	JAN	1230	99	200.	-2.1	166.0
1	JAN	1515	14	200.	-2.1	166.0	2	JAN	0200	57	227.	7.5	168.3	2	JAN	1245	100	200.	-2.1	166.0
1	JAN	1530	15	200.	-2.1	166.0	2	JAN	0215	58	231.	8.6	168.6	2	JAN	1300	101	200.	-2.1	166.0
1	JAN	1545	16	200.	-2.1	166.0	2	JAN	0230	59	232.	9.0	168.7	2	JAN	1315	102	200.	-2.1	166.0
1	JAN	1600	17	200.	-2.1	166.0	2	JAN	0245	60	231.	8.7	168.6	2	JAN	1330	103	200.	-2.1	166.0
1	JAN	1615	18	200.	-2.1	166.0	2	JAN	0300	61	228.	7.8	168.4	2	JAN	1345	104	200.	-2.1	166.0
1	JAN	1630	19	200.	-2.1	166.0	2	JAN	0315	62	225.	6.6	168.0	2	JAN	1400	105	200.	-2.1	166.0
1	JAN	1645	20	200.	-2.1	166.0	2	JAN	0330	63	219.	5.1	167.6	2	JAN	1415	106	200.	-2.1	166.0
1	JAN	1700	21	200.	-2.1	166.0	2	JAN	0345	64	213.	3.4	167.1	2	JAN	1430	107	200.	-2.1	166.0
1	JAN	1715	22	200.	-2.1	166.0	2	JAN	0400	65	206.	1.5	166.5	2	JAN	1445	108	200.	-2.1	166.0
1	JAN	1730	23	200.	-2.1	166.0	2	JAN	0415	66	200.	-.5	166.0	2	JAN	1500	109	200.	-2.1	166.0
1	JAN	1745	24	200.	-2.1	166.0	2	JAN	0430	67	200.	-2.1	166.0	2	JAN	1515	110	200.	-2.1	166.0
1	JAN	1800	25	200.	-2.1	166.0	2	JAN	0445	68	200.	-2.1	166.0	2	JAN	1530	111	200.	-2.1	166.0
1	JAN	1815	26	200.	-2.1	166.0	2	JAN	0500	69	200.	-2.1	166.0	2	JAN	1545	112	200.	-2.1	166.0
1	JAN	1830	27	200.	-2.1	166.0	2	JAN	0515	70	200.	-2.1	166.0	2	JAN	1600	113	200.	-2.1	166.0
1	JAN	1845	28	200.	-2.1	166.0	2	JAN	0530	71	200.	-2.1	166.0	2	JAN	1615	114	200.	-2.1	166.0
1	JAN	1900	29	200.	-2.1	166.0	2	JAN	0545	72	200.	-2.1	166.0	2	JAN	1630	115	200.	-2.1	166.0
1	JAN	1915	30	200.	-2.1	166.0	2	JAN	0600	73	200.	-2.1	166.0	2	JAN	1645	116	200.	-2.1	166.0
1	JAN	1930	31	200.	-2.1	166.0	2	JAN	0615	74	200.	-2.1	166.0	2	JAN	1700	117	200.	-2.1	166.0
1	JAN	1945	32	200.	-2.1	166.0	2	JAN	0630	75	200.	-2.1	166.0	2	JAN	1715	118	200.	-2.1	166.0
1	JAN	2000	33	200.	-2.1	166.0	2	JAN	0645	76	200.	-2.1	166.0	2	JAN	1730	119	200.	-2.1	166.0
1	JAN	2015	34	200.	-2.1	166.0	2	JAN	0700	77	200.	-2.1	166.0	2	JAN	1745	120	200.	-2.1	166.0
1	JAN	2030	35	200.	-2.1	166.0	2	JAN	0715	78	200.	-2.1	166.0	2	JAN	1800	121	200.	-2.1	166.0
1	JAN	2045	36	200.	-2.1	166.0	2	JAN	0730	79	200.	-2.1	166.0	2	JAN	1815	122	200.	-2.1	166.0
1	JAN	2100	37	200.	-2.1	166.0	2	JAN	0745	80	200.	-2.1	166.0	2	JAN	1830	123	200.	-2.1	166.0
1	JAN	2115	38	200.	-2.1	166.0	2	JAN	0800	81	200.	-2.1	166.0	2	JAN	1845	124	200.	-2.1	166.0
1	JAN	2130	39	200.	-2.1	166.0	2	JAN	0815	82	200.	-2.1	166.0	2	JAN	1900	125	200.	-2.1	166.0
1	JAN	2145	40	200.	-2.1	166.0	2	JAN	0830	83	200.	-2.1	166.0	2	JAN	1915	126	200.	-2.1	166.0

1 JAN 2200 41 200. -2.1 166.0 * 2 JAN 0845 84 200. -2.1 166.0 * 2 JAN 1930 127 200. -2.1 166.0
1 JAN 2215 42 200. -2.1 166.0 * 2 JAN 0900 85 200. -2.1 166.0 * 2 JAN 1945 128 200. -2.1 166.0
1 JAN 2230 43 200. -2.1 166.0 * 2 JAN 0915 86 200. -2.1 166.0 * 2 JAN 2000 129 200. -2.1 166.0

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PEAK FLOW	TIME		MAXIMUM AVERAGE FLOW			
			6-HR	24-HR	72-HR	32.00-HR
+	(CFS)	(HR)				
		(CFS)				
+	232.	14.50	211.	203.	202.	202.
		(INCHES)	3.984	15.350	20.323	20.323
		(AC-FT)	105.	403.	533.	533.

PEAK STORAGE	TIME		MAXIMUM AVERAGE STORAGE			
			6-HR	24-HR	72-HR	32.00-HR
+	(AC-FT)	(HR)				
	9.	14.50	2.	0.	0.	-1.

PEAK STAGE	TIME		MAXIMUM AVERAGE STAGE			
			6-HR	24-HR	72-HR	32.00-HR
+	(FEET)	(HR)				
	168.71	14.50	166.88	166.22	166.16	166.16

CUMULATIVE AREA = .49 SQ MI

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137 KK * BSN10 *

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5 IN TIME DATA FOR INPUT TIME SERIES
JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

138 BA SUBBASIN CHARACTERISTICS
TAREA .02 SUBBASIN AREA

PRECIPITATION DATA

139 PB STORM 1.00 BASIN TOTAL PRECIPITATION

140 PI INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00

.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00
.00 .00 .00 .00 .00 .00 .00 .00 .00 .00

LS

SCS LOSS RATE

STRTL .94 INITIAL ABSTRACTION

CRVNBR 68.00 CURVE NUMBER

RTIMP 10.00 PERCENT IMPERVIOUS AREA

151 UD

SCS DIMENSIONLESS UNITGRAPH

TLAG .67 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH
15 END-OF-PERIOD ORDINATES

3. 9. 13. 11. 8. 4. 3. 2. 1. 1.
0. 0. 0. 0. 0.

HYDROGRAPH AT STATION BSN10

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	2	JAN	0730	79	.00	.00	.00	0.
1	JAN	1530	15	.00	.00	.00	0.	2	JAN	0745	80	.00	.00	.00	0.
1	JAN	1545	16	.00	.00	.00	0.	2	JAN	0800	81	.00	.00	.00	0.
1	JAN	1600	17	.00	.00	.00	0.	2	JAN	0815	82	.00	.00	.00	0.
1	JAN	1615	18	.00	.00	.00	0.	2	JAN	0830	83	.00	.00	.00	0.
1	JAN	1630	19	.00	.00	.00	0.	2	JAN	0845	84	.00	.00	.00	0.
1	JAN	1645	20	.00	.00	.00	0.	2	JAN	0900	85	.00	.00	.00	0.
1	JAN	1700	21	.00	.00	.00	0.	2	JAN	0915	86	.00	.00	.00	0.
1	JAN	1715	22	.00	.00	.00	0.	2	JAN	0930	87	.00	.00	.00	0.
1	JAN	1730	23	.00	.00	.00	0.	2	JAN	0945	88	.00	.00	.00	0.
1	JAN	1745	24	.00	.00	.00	0.	2	JAN	1000	89	.00	.00	.00	0.
1	JAN	1800	25	.00	.00	.00	0.	2	JAN	1015	90	.00	.00	.00	0.
1	JAN	1815	26	.01	.00	.00	0.	2	JAN	1030	91	.00	.00	.00	0.
1	JAN	1830	27	.01	.00	.00	0.	2	JAN	1045	92	.00	.00	.00	0.
1	JAN	1845	28	.00	.00	.00	0.	2	JAN	1100	93	.00	.00	.00	0.
1	JAN	1900	29	.01	.00	.00	0.	2	JAN	1115	94	.00	.00	.00	0.
1	JAN	1915	30	.00	.00	.00	0.	2	JAN	1130	95	.00	.00	.00	0.
1	JAN	1930	31	.01	.00	.00	0.	2	JAN	1145	96	.00	.00	.00	0.

1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	0.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	0.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	0.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	0.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
+	(HR)				
	(CFS)				
	1. 12.50	0.	0.	0.	0.
	(INCHES)	.070	.100	.101	.101
	(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .02 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN10
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP	Q
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						*						
1 JAN 1200	1	.00	.00	.00	0.	*	2 JAN 0415	66	.04	.01	.03	3.
1 JAN 1215	2	.02	.02	.00	0.	*	2 JAN 0430	67	.03	.01	.03	2.
1 JAN 1230	3	.02	.02	.00	0.	*	2 JAN 0445	68	.04	.01	.03	2.
1 JAN 1245	4	.02	.01	.00	0.	*	2 JAN 0500	69	.03	.01	.03	2.
1 JAN 1300	5	.02	.02	.00	0.	*	2 JAN 0515	70	.04	.01	.03	2.
1 JAN 1315	6	.02	.02	.00	0.	*	2 JAN 0530	71	.03	.01	.03	2.
1 JAN 1330	7	.02	.02	.00	0.	*	2 JAN 0545	72	.04	.01	.03	2.
1 JAN 1345	8	.02	.01	.00	0.	*	2 JAN 0600	73	.03	.01	.03	2.
1 JAN 1400	9	.02	.02	.00	0.	*	2 JAN 0615	74	.04	.01	.03	2.
1 JAN 1415	10	.02	.02	.00	0.	*	2 JAN 0630	75	.03	.01	.03	2.
1 JAN 1430	11	.03	.03	.00	0.	*	2 JAN 0645	76	.03	.01	.03	2.
1 JAN 1445	12	.02	.02	.00	0.	*	2 JAN 0700	77	.04	.01	.03	2.
1 JAN 1500	13	.02	.02	.00	0.	*	2 JAN 0715	78	.03	.01	.03	2.
1 JAN 1515	14	.02	.02	.00	0.	*	2 JAN 0730	79	.04	.01	.03	2.
1 JAN 1530	15	.03	.03	.00	0.	*	2 JAN 0745	80	.03	.01	.03	2.
1 JAN 1545	16	.02	.02	.00	0.	*	2 JAN 0800	81	.04	.01	.03	2.
1 JAN 1600	17	.02	.02	.00	0.	*	2 JAN 0815	82	.02	.00	.02	2.
1 JAN 1615	18	.03	.03	.00	0.	*	2 JAN 0830	83	.02	.00	.02	1.
1 JAN 1630	19	.03	.03	.00	0.	*	2 JAN 0845	84	.02	.00	.02	1.
1 JAN 1645	20	.03	.03	.00	0.	*	2 JAN 0900	85	.02	.00	.02	1.
1 JAN 1700	21	.03	.03	.00	0.	*	2 JAN 0915	86	.02	.00	.02	1.
1 JAN 1715	22	.03	.03	.00	0.	*	2 JAN 0930	87	.02	.00	.02	1.
1 JAN 1730	23	.03	.03	.00	0.	*	2 JAN 0945	88	.02	.00	.02	1.
1 JAN 1745	24	.03	.03	.00	0.	*	2 JAN 1000	89	.02	.00	.02	1.
1 JAN 1800	25	.03	.03	.00	0.	*	2 JAN 1015	90	.02	.00	.02	1.
1 JAN 1815	26	.04	.04	.00	0.	*	2 JAN 1030	91	.02	.00	.02	1.
1 JAN 1830	27	.04	.04	.00	0.	*	2 JAN 1045	92	.02	.00	.02	1.
1 JAN 1845	28	.04	.04	.00	0.	*	2 JAN 1100	93	.02	.00	.02	1.
1 JAN 1900	29	.04	.04	.00	0.	*	2 JAN 1115	94	.02	.00	.02	1.
1 JAN 1915	30	.04	.04	.00	0.	*	2 JAN 1130	95	.02	.00	.02	1.
1 JAN 1930	31	.04	.04	.00	0.	*	2 JAN 1145	96	.02	.00	.02	1.
1 JAN 1945	32	.04	.04	.00	0.	*	2 JAN 1200	97	.02	.00	.02	1.
1 JAN 2000	33	.04	.04	.00	0.	*	2 JAN 1215	98	.00	.00	.00	1.
1 JAN 2015	34	.05	.05	.01	0.	*	2 JAN 1230	99	.00	.00	.00	1.
1 JAN 2030	35	.05	.05	.01	0.	*	2 JAN 1245	100	.00	.00	.00	1.
1 JAN 2045	36	.05	.04	.01	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.05	.05	.01	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.06	.05	.01	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.06	.05	.01	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	1.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.07	.03	1.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	1.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	1.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	2.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	2.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	4.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	10.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	21.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	27.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	25.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	20.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	14.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	11.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	8.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	7.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	5.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	5.	*	2 JAN 1845	124	.00	.00	.00	0.



TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

* DA MON HRMN ORD					FLOW	*	* DA MON HRMN ORD					FLOW	*	* DA MON HRMN ORD					FLOW				
* DA MON HRMN ORD					FLOW	*	* DA MON HRMN ORD					FLOW	*	* DA MON HRMN ORD					FLOW				
1	JAN	1200	1		0.	*	1	JAN	2015	34	201.	*	2	JAN	0430	67	203.	*	2	JAN	1245	100	201.
1	JAN	1215	2		200.	*	1	JAN	2030	35	201.	*	2	JAN	0445	68	203.	*	2	JAN	1300	101	201.
1	JAN	1230	3		201.	*	1	JAN	2045	36	201.	*	2	JAN	0500	69	202.	*	2	JAN	1315	102	201.
1	JAN	1245	4		201.	*	1	JAN	2100	37	201.	*	2	JAN	0515	70	202.	*	2	JAN	1330	103	201.
1	JAN	1300	5		201.	*	1	JAN	2115	38	201.	*	2	JAN	0530	71	202.	*	2	JAN	1345	104	201.
1	JAN	1315	6		201.	*	1	JAN	2130	39	201.	*	2	JAN	0545	72	202.	*	2	JAN	1400	105	201.
1	JAN	1330	7		201.	*	1	JAN	2145	40	201.	*	2	JAN	0600	73	202.	*	2	JAN	1415	106	201.
	JAN	1345	8		201.	*	1	JAN	2200	41	201.	*	2	JAN	0615	74	202.	*	2	JAN	1430	107	200.
1	JAN	1400	9		201.	*	1	JAN	2215	42	201.	*	2	JAN	0630	75	202.	*	2	JAN	1445	108	200.
1	JAN	1415	10		201.	*	1	JAN	2230	43	201.	*	2	JAN	0645	76	202.	*	2	JAN	1500	109	200.
1	JAN	1430	11		201.	*	1	JAN	2245	44	202.	*	2	JAN	0700	77	202.	*	2	JAN	1515	110	200.
1	JAN	1445	12		201.	*	1	JAN	2300	45	202.	*	2	JAN	0715	78	202.	*	2	JAN	1530	111	200.

1 JAN 1500	13	201.	*	1 JAN 2315	46	202.	*	2 JAN 0730	79	202.	*	2 JAN 1545	112	200.
1 JAN 1515	14	201.	*	1 JAN 2330	47	203.	*	2 JAN 0745	80	202.	*	2 JAN 1600	113	200.
1 JAN 1530	15	201.	*	1 JAN 2345	48	204.	*	2 JAN 0800	81	202.	*	2 JAN 1615	114	200.
1 JAN 1545	16	201.	*	2 JAN 0000	49	210.	*	2 JAN 0815	82	202.	*	2 JAN 1630	115	200.
1 JAN 1600	17	201.	*	2 JAN 0015	50	221.	*	2 JAN 0830	83	202.	*	2 JAN 1645	116	200.
1 JAN 1615	18	201.	*	2 JAN 0030	51	227.	*	2 JAN 0845	84	202.	*	2 JAN 1700	117	200.
1 JAN 1630	19	201.	*	2 JAN 0045	52	226.	*	2 JAN 0900	85	202.	*	2 JAN 1715	118	200.
1 JAN 1645	20	201.	*	2 JAN 0100	53	220.	*	2 JAN 0915	86	202.	*	2 JAN 1730	119	200.
1 JAN 1700	21	201.	*	2 JAN 0115	54	220.	*	2 JAN 0930	87	202.	*	2 JAN 1745	120	200.
1 JAN 1715	22	201.	*	2 JAN 0130	55	225.	*	2 JAN 0945	88	202.	*	2 JAN 1800	121	200.
1 JAN 1730	23	201.	*	2 JAN 0145	56	230.	*	2 JAN 1000	89	202.	*	2 JAN 1815	122	200.
1 JAN 1745	24	201.	*	2 JAN 0200	57	234.	*	2 JAN 1015	90	202.	*	2 JAN 1830	123	200.
1 JAN 1800	25	201.	*	2 JAN 0215	58	236.	*	2 JAN 1030	91	202.	*	2 JAN 1845	124	200.
1 JAN 1815	26	201.	*	2 JAN 0230	59	236.	*	2 JAN 1045	92	202.	*	2 JAN 1900	125	200.
1 JAN 1830	27	201.	*	2 JAN 0245	60	235.	*	2 JAN 1100	93	202.	*	2 JAN 1915	126	200.
1 JAN 1845	28	201.	*	2 JAN 0300	61	232.	*	2 JAN 1115	94	202.	*	2 JAN 1930	127	200.
1 JAN 1900	29	201.	*	2 JAN 0315	62	228.	*	2 JAN 1130	95	202.	*	2 JAN 1945	128	200.
1 JAN 1915	30	201.	*	2 JAN 0330	63	222.	*	2 JAN 1145	96	202.	*	2 JAN 2000	129	200.
1 JAN 1930	31	201.	*	2 JAN 0345	64	216.	*	2 JAN 1200	97	202.	*			
1 JAN 1945	32	201.	*	2 JAN 0400	65	209.	*	2 JAN 1215	98	202.	*			
1 JAN 2000	33	201.	*	2 JAN 0415	66	203.	*	2 JAN 1230	99	201.	*			
			*				*				*			

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+ 236.	14.50	219.	206.	204.	204.
	(INCHES)	3.963	14.903	19.672	19.672
	(AC-FT)	108.	408.	538.	538.

CUMULATIVE AREA = .51 SQ MI

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154 KK * POND3 *
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HYDROGRAPH ROUTING DATA

155 RS	STORAGE ROUTING
	NSTPS 1 NUMBER OF SUBREACHES
	ITYP ELEV TYPE OF INITIAL CONDITION
	RSVRIC 162.00 INITIAL CONDITION
	X .00 WORKING R AND D COEFFICIENT

SA	AREA	1.7	1.8	2.0	2.1
157 SE	ELEVATION	166.00	167.00	168.00	169.00

158 SL	LOW-LEVEL OUTLET
	ELEVL 158.50 ELEVATION AT CENTER OF OUTLET

CAREA 14.73 CROSS-SECTIONAL AREA
COQL .60 COEFFICIENT
EXPL .50 EXPONENT OF HEAD

SS SPILLWAY

CREL 168.00 SPILLWAY CREST ELEVATION
SPWID .00 SPILLWAY WIDTH
COQW .00 WEIR COEFFICIENT
EXPW 1.50 EXPONENT OF HEAD

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	1.76	3.67	5.72
ELEVATION	166.00	167.00	168.00	169.00

COMPUTED OUTFLOW-ELEVATION DATA

OUTFLOW	.00	196.55	199.05	201.61	204.23	206.93	209.70	212.54	215.47	218.47
ELEVATION	166.00	166.19	166.39	166.59	166.80	167.02	167.25	167.49	167.74	168.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	.32	.67	1.03	1.41	1.76	1.81	2.23	2.68	3.16
OUTFLOW	194.11	196.55	199.05	201.61	204.23	206.65	206.93	209.70	212.54	215.47
ELEVATION	166.00	166.19	166.39	166.59	166.80	167.00	167.02	167.25	167.49	167.74

STORAGE	3.67	5.72
OUTFLOW	218.47	229.68
ELEVATION	168.00	169.00

HYDROGRAPH AT STATION POND3
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE
1	JAN	1200	1	133.	.6	166.0	1	JAN	2245	44	201.	.9	166.5	2	JAN	0930	87	203.	1.2	166.7
1	JAN	1215	2	194.	-.7	166.0	1	JAN	2300	45	201.	.9	166.5	2	JAN	0945	88	203.	1.2	166.7
1	JAN	1230	3	194.	-.5	166.0	1	JAN	2315	46	201.	1.0	166.6	2	JAN	1000	89	203.	1.2	166.7
1	JAN	1245	4	194.	-.4	166.0	1	JAN	2330	47	201.	1.0	166.6	2	JAN	1015	90	203.	1.2	166.7
1	JAN	1300	5	194.	-.3	166.0	1	JAN	2345	48	202.	1.0	166.6	2	JAN	1030	91	202.	1.1	166.7
1	JAN	1315	6	194.	-.1	166.0	2	JAN	0000	49	202.	1.1	166.7	2	JAN	1045	92	202.	1.1	166.6
1	JAN	1330	7	194.	.0	166.0	2	JAN	0015	50	204.	1.4	166.8	2	JAN	1100	93	202.	1.1	166.6
1	JAN	1345	8	195.	.1	166.1	2	JAN	0030	51	207.	1.8	167.0	2	JAN	1115	94	202.	1.1	166.6
1	JAN	1400	9	196.	.2	166.1	2	JAN	0045	52	209.	2.2	167.2	2	JAN	1130	95	202.	1.1	166.6
1	JAN	1415	10	197.	.3	166.2	2	JAN	0100	53	211.	2.4	167.4	2	JAN	1145	96	202.	1.1	166.6
1	JAN	1430	11	197.	.4	166.2	2	JAN	0115	54	212.	2.6	167.5	2	JAN	1200	97	202.	1.1	166.6
1	JAN	1445	12	198.	.5	166.3	2	JAN	0130	55	213.	2.8	167.6	2	JAN	1215	98	202.	1.1	166.6
1	JAN	1500	13	198.	.5	166.3	2	JAN	0145	56	215.	3.1	167.7	2	JAN	1230	99	202.	1.1	166.6
1	JAN	1515	14	198.	.6	166.3	2	JAN	0200	57	217.	3.4	167.9	2	JAN	1245	100	202.	1.0	166.6
1	JAN	1530	15	199.	.6	166.4	2	JAN	0215	58	219.	3.8	168.1	2	JAN	1300	101	202.	1.0	166.6
1	JAN	1545	16	199.	.7	166.4	2	JAN	0230	59	221.	4.1	168.2	2	JAN	1315	102	202.	1.0	166.6
1	JAN	1600	17	199.	.7	166.4	2	JAN	0245	60	222.	4.4	168.4	2	JAN	1330	103	201.	1.0	166.6
1	JAN	1615	18	199.	.7	166.4	2	JAN	0300	61	224.	4.6	168.5	2	JAN	1345	104	201.	1.0	166.6

1 JAN 1630	19	200.	.7	166.4 *	2 JAN 0315	62	224.	4.7	168.5 *	2 JAN 1400	105	201.	1.0	166.6
1 JAN 1645	20	200.	.8	166.4 *	2 JAN 0330	63	224.	4.7	168.5 *	2 JAN 1415	106	201.	1.0	166.5
1 JAN 1700	21	200.	.8	166.4 *	2 JAN 0345	64	224.	4.6	168.5 *	2 JAN 1430	107	201.	.9	166.5
1 JAN 1715	22	200.	.8	166.5 *	2 JAN 0400	65	223.	4.4	168.4 *	2 JAN 1445	108	201.	.9	166.5
1 JAN 1730	23	200.	.8	166.5 *	2 JAN 0415	66	221.	4.1	168.2 *	2 JAN 1500	109	201.	.9	166.5
1 JAN 1745	24	200.	.8	166.5 *	2 JAN 0430	67	219.	3.7	168.0 *	2 JAN 1515	110	201.	.9	166.5
1 JAN 1800	25	200.	.8	166.5 *	2 JAN 0445	68	217.	3.4	167.9 *	2 JAN 1530	111	201.	.9	166.5
1 JAN 1815	26	200.	.8	166.5 *	2 JAN 0500	69	215.	3.1	167.7 *	2 JAN 1545	112	201.	.9	166.5
1 JAN 1830	27	200.	.8	166.5 *	2 JAN 0515	70	214.	2.9	167.6 *	2 JAN 1600	113	201.	.9	166.5
1 JAN 1845	28	200.	.8	166.5 *	2 JAN 0530	71	212.	2.7	167.5 *	2 JAN 1615	114	201.	.9	166.5
1 JAN 1900	29	200.	.9	166.5 *	2 JAN 0545	72	211.	2.5	167.4 *	2 JAN 1630	115	201.	.9	166.5
1 JAN 1915	30	200.	.9	166.5 *	2 JAN 0600	73	210.	2.3	167.3 *	2 JAN 1645	116	201.	.9	166.5
1 JAN 1930	31	200.	.9	166.5 *	2 JAN 0615	74	209.	2.1	167.2 *	2 JAN 1700	117	201.	.9	166.5
1 JAN 1945	32	201.	.9	166.5 *	2 JAN 0630	75	208.	2.0	167.1 *	2 JAN 1715	118	201.	.9	166.5
1 JAN 2000	33	201.	.9	166.5 *	2 JAN 0645	76	207.	1.9	167.1 *	2 JAN 1730	119	201.	.9	166.5
1 JAN 2015	34	201.	.9	166.5 *	2 JAN 0700	77	207.	1.8	167.0 *	2 JAN 1745	120	201.	.9	166.5
1 JAN 2030	35	201.	.9	166.5 *	2 JAN 0715	78	206.	1.7	167.0 *	2 JAN 1800	121	201.	.9	166.5
1 JAN 2045	36	201.	.9	166.5 *	2 JAN 0730	79	206.	1.6	166.9 *	2 JAN 1815	122	201.	.9	166.5
1 JAN 2100	37	201.	.9	166.5 *	2 JAN 0745	80	205.	1.5	166.9 *	2 JAN 1830	123	201.	.9	166.5
1 JAN 2115	38	201.	.9	166.5 *	2 JAN 0800	81	205.	1.5	166.8 *	2 JAN 1845	124	201.	.9	166.5
1 JAN 2130	39	201.	.9	166.5 *	2 JAN 0815	82	204.	1.4	166.8 *	2 JAN 1900	125	201.	.9	166.5
1 JAN 2145	40	201.	.9	166.5 *	2 JAN 0830	83	204.	1.4	166.8 *	2 JAN 1915	126	201.	.9	166.5
1 JAN 2200	41	201.	.9	166.5 *	2 JAN 0845	84	204.	1.3	166.8 *	2 JAN 1930	127	201.	.9	166.5
1 JAN 2215	42	201.	.9	166.5 *	2 JAN 0900	85	204.	1.3	166.7 *	2 JAN 1945	128	201.	.9	166.5
1 JAN 2230	43	201.	.9	166.5 *	2 JAN 0915	86	203.	1.3	166.7 *	2 JAN 2000	129	201.	.9	166.5

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
224.	15.50	216.	206.	203.	203.
		(INCHES)	3.923	14.900	19.664
		(AC-FT)	107.	408.	538.

PEAK STORAGE + (AC-FT)	TIME (HR)	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	32.00-HR
5.	15.50	3.	2.	1.	1.

PEAK STAGE + (FEET)	TIME (HR)	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	32.00-HR
168.52	15.50	167.83	166.92	166.77	166.77

CUMULATIVE AREA = .51 SQ MI

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160 KK

*
* BSN3 *
*

5 IN

TIME DATA FOR INPUT TIME SERIES

JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

161 BA

SUBBASIN CHARACTERISTICS

TAREA .02 SUBBASIN AREA

PRECIPITATION DATA

162 PB

STORM 1.00 BASIN TOTAL PRECIPITATION

163 PI

INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

173 LS

SCS LOSS RATE

STRTL .94 INITIAL ABSTRACTION
CRVNBR 68.00 CURVE NUMBER
RTIMP 10.00 PERCENT IMPERVIOUS AREA

174 UD

SCS DIMENSIONLESS UNITGRAPH

TLAG .58 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH

14 END-OF-PERIOD ORDINATES

4.	14.	16.	12.	7.	4.	2.	1.	1.	0.
0.	0.	0.	0.						

HYDROGRAPH AT STATION BSN3

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	0.

1 JAN 1415	10	.00	.00	.00	0.	*	2 JAN 0630	75	.00	.00	.00	0.
1 JAN 1430	11	.00	.00	.00	0.	*	2 JAN 0645	76	.00	.00	.00	0.
1 JAN 1445	12	.00	.00	.00	0.	*	2 JAN 0700	77	.00	.00	.00	0.
1 JAN 1500	13	.00	.00	.00	0.	*	2 JAN 0715	78	.00	.00	.00	0.
1 JAN 1515	14	.00	.00	.00	0.	*	2 JAN 0730	79	.00	.00	.00	0.
1 JAN 1530	15	.00	.00	.00	0.	*	2 JAN 0745	80	.00	.00	.00	0.
1 JAN 1545	16	.00	.00	.00	0.	*	2 JAN 0800	81	.00	.00	.00	0.
1 JAN 1600	17	.00	.00	.00	0.	*	2 JAN 0815	82	.00	.00	.00	0.
1 JAN 1615	18	.00	.00	.00	0.	*	2 JAN 0830	83	.00	.00	.00	0.
1 JAN 1630	19	.00	.00	.00	0.	*	2 JAN 0845	84	.00	.00	.00	0.
1 JAN 1645	20	.00	.00	.00	0.	*	2 JAN 0900	85	.00	.00	.00	0.
1 JAN 1700	21	.00	.00	.00	0.	*	2 JAN 0915	86	.00	.00	.00	0.
1 JAN 1715	22	.00	.00	.00	0.	*	2 JAN 0930	87	.00	.00	.00	0.
1 JAN 1730	23	.00	.00	.00	0.	*	2 JAN 0945	88	.00	.00	.00	0.
1 JAN 1745	24	.00	.00	.00	0.	*	2 JAN 1000	89	.00	.00	.00	0.
1 JAN 1800	25	.00	.00	.00	0.	*	2 JAN 1015	90	.00	.00	.00	0.
1 JAN 1815	26	.01	.00	.00	0.	*	2 JAN 1030	91	.00	.00	.00	0.
1 JAN 1830	27	.01	.00	.00	0.	*	2 JAN 1045	92	.00	.00	.00	0.
1 JAN 1845	28	.00	.00	.00	0.	*	2 JAN 1100	93	.00	.00	.00	0.
1 JAN 1900	29	.01	.00	.00	0.	*	2 JAN 1115	94	.00	.00	.00	0.
1 JAN 1915	30	.00	.00	.00	0.	*	2 JAN 1130	95	.00	.00	.00	0.
1 JAN 1930	31	.01	.00	.00	0.	*	2 JAN 1145	96	.00	.00	.00	0.
1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	0.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	1.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	1.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	0.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
(CFS)	(HR)				
1.	12.50	0.	0.	0.	0.
(INCHES)		.070	.100	.101	.101
(AC-FT)		0.	0.	0.	0.

CUMULATIVE AREA = .02 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN3
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.04	.01	.03	3.
1	JAN	1215	2	.02	.02	.00	0.	*	2	JAN	0430	67	.03	.01	.03	3.
1	JAN	1230	3	.02	.02	.00	0.	*	2	JAN	0445	68	.04	.01	.03	2.
1	JAN	1245	4	.02	.01	.00	0.	*	2	JAN	0500	69	.03	.01	.03	2.
1	JAN	1300	5	.02	.02	.00	0.	*	2	JAN	0515	70	.04	.01	.03	2.
1	JAN	1315	6	.02	.02	.00	0.	*	2	JAN	0530	71	.03	.01	.03	2.
1	JAN	1330	7	.02	.02	.00	0.	*	2	JAN	0545	72	.04	.01	.03	2.
1	JAN	1345	8	.02	.01	.00	0.	*	2	JAN	0600	73	.03	.01	.03	2.
1	JAN	1400	9	.02	.02	.00	0.	*	2	JAN	0615	74	.04	.01	.03	2.
1	JAN	1415	10	.02	.02	.00	0.	*	2	JAN	0630	75	.03	.01	.03	2.
1	JAN	1430	11	.03	.03	.00	0.	*	2	JAN	0645	76	.03	.01	.03	2.
1	JAN	1445	12	.02	.02	.00	0.	*	2	JAN	0700	77	.04	.01	.03	2.
1	JAN	1500	13	.02	.02	.00	0.	*	2	JAN	0715	78	.03	.01	.03	2.
1	JAN	1515	14	.02	.02	.00	0.	*	2	JAN	0730	79	.04	.01	.03	2.
1	JAN	1530	15	.03	.03	.00	0.	*	2	JAN	0745	80	.03	.01	.03	2.
1	JAN	1545	16	.02	.02	.00	0.	*	2	JAN	0800	81	.04	.01	.03	2.
1	JAN	1600	17	.02	.02	.00	0.	*	2	JAN	0815	82	.02	.00	.02	2.
1	JAN	1615	18	.03	.03	.00	0.	*	2	JAN	0830	83	.02	.00	.02	2.
1	JAN	1630	19	.03	.03	.00	0.	*	2	JAN	0845	84	.02	.00	.02	2.
1	JAN	1645	20	.03	.03	.00	0.	*	2	JAN	0900	85	.02	.00	.02	1.
1	JAN	1700	21	.03	.03	.00	0.	*	2	JAN	0915	86	.02	.00	.02	1.
1	JAN	1715	22	.03	.03	.00	0.	*	2	JAN	0930	87	.02	.00	.02	1.
1	JAN	1730	23	.03	.03	.00	0.	*	2	JAN	0945	88	.02	.00	.02	1.
1	JAN	1745	24	.03	.03	.00	0.	*	2	JAN	1000	89	.02	.00	.02	1.
1	JAN	1800	25	.03	.03	.00	0.	*	2	JAN	1015	90	.02	.00	.02	1.
1	JAN	1815	26	.04	.04	.00	0.	*	2	JAN	1030	91	.02	.00	.02	1.
1	JAN	1830	27	.04	.04	.00	0.	*	2	JAN	1045	92	.02	.00	.02	1.
1	JAN	1845	28	.04	.04	.00	0.	*	2	JAN	1100	93	.02	.00	.02	1.
1	JAN	1900	29	.04	.04	.00	0.	*	2	JAN	1115	94	.02	.00	.02	1.
1	JAN	1915	30	.04	.04	.00	0.	*	2	JAN	1130	95	.02	.00	.02	1.
1	JAN	1930	31	.04	.04	.00	0.	*	2	JAN	1145	96	.02	.00	.02	1.
1	JAN	1945	32	.04	.04	.00	0.	*	2	JAN	1200	97	.02	.00	.02	1.
1	JAN	2000	33	.04	.04	.00	0.	*	2	JAN	1215	98	.00	.00	.00	1.
1	JAN	2015	34	.05	.05	.01	0.	*	2	JAN	1230	99	.00	.00	.00	1.
1	JAN	2030	35	.05	.05	.01	0.	*	2	JAN	1245	100	.00	.00	.00	1.
1	JAN	2045	36	.05	.04	.01	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.05	.05	.01	0.	*	2	JAN	1315	102	.00	.00	.00	0.

1 JAN 2115	38	.06	.05	.01	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.06	.05	.01	1.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.07	.05	.02	1.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.07	.05	.02	1.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.09	.07	.03	1.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.09	.06	.03	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	1.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	2.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	2.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	3.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	5.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	14.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	29.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	33.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	28.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	20.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	14.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	11.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	8.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	7.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	6.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	5.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	4.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	3.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	3.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	3.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	3.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	3.	*						

*

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW + (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+ 33.	12.50	9.	3.	2.	2.
	(INCHES)	3.468	4.432	4.441	4.441
	(AC-FT)	4.	6.	6.	6.

CUMULATIVE AREA = .02 SQ MI

*** **

175 KK

*
* BSN2 *
*

IN

TIME DATA FOR INPUT TIME SERIES

JXMIN 15 TIME INTERVAL IN MINUTES
JXDATE 1JAN 4 STARTING DATE
JXTIME 1200 STARTING TIME

SUBBASIN RUNOFF DATA

176 BA

SUBBASIN CHARACTERISTICS

TAREA .03 SUBBASIN AREA

PRECIPITATION DATA

177 PB STORM 1.00 BASIN TOTAL PRECIPITATION

178 PI INCREMENTAL PRECIPITATION PATTERN

.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.01	.01	.00	.01	.00	.01
.01	.00	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.02	.02	.02	.02	.10	.28	.04	.04
.02	.02	.01	.01	.01	.01	.01	.01	.01	.01
.01	.01	.01	.01	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
.00	.00	.00	.00	.00	.00				

188 LS SCS LOSS RATE

STRTL .94 INITIAL ABSTRACTION

CRVNBR 68.00 CURVE NUMBER

RTIMP 10.00 PERCENT IMPERVIOUS AREA

189 UD SCS DIMENSIONLESS UNITGRAPH

TLAG .67 LAG

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

UNIT HYDROGRAPH

15 END-OF-PERIOD ORDINATES

3.	11.	15.	14.	9.	5.	3.	2.	1.	1.
0.	0.	0.	0.	0.					

HYDROGRAPH AT STATION BSN2

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q		DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.00	.00	.00	0.
1	JAN	1215	2	.00	.00	.00	0.	*	2	JAN	0430	67	.00	.00	.00	0.
1	JAN	1230	3	.00	.00	.00	0.	*	2	JAN	0445	68	.00	.00	.00	0.
1	JAN	1245	4	.00	.00	.00	0.	*	2	JAN	0500	69	.00	.00	.00	0.
1	JAN	1300	5	.00	.00	.00	0.	*	2	JAN	0515	70	.00	.00	.00	0.
1	JAN	1315	6	.00	.00	.00	0.	*	2	JAN	0530	71	.00	.00	.00	0.
1	JAN	1330	7	.00	.00	.00	0.	*	2	JAN	0545	72	.00	.00	.00	0.
1	JAN	1345	8	.00	.00	.00	0.	*	2	JAN	0600	73	.00	.00	.00	0.
1	JAN	1400	9	.00	.00	.00	0.	*	2	JAN	0615	74	.00	.00	.00	0.
1	JAN	1415	10	.00	.00	.00	0.	*	2	JAN	0630	75	.00	.00	.00	0.
1	JAN	1430	11	.00	.00	.00	0.	*	2	JAN	0645	76	.00	.00	.00	0.
1	JAN	1445	12	.00	.00	.00	0.	*	2	JAN	0700	77	.00	.00	.00	0.
1	JAN	1500	13	.00	.00	.00	0.	*	2	JAN	0715	78	.00	.00	.00	0.
1	JAN	1515	14	.00	.00	.00	0.	*	2	JAN	0730	79	.00	.00	.00	0.

1 JAN 1530	15	.00	.00	.00	0.	*	2 JAN 0745	80	.00	.00	.00	0.
1 JAN 1545	16	.00	.00	.00	0.	*	2 JAN 0800	81	.00	.00	.00	0.
1 JAN 1600	17	.00	.00	.00	0.	*	2 JAN 0815	82	.00	.00	.00	0.
1 JAN 1615	18	.00	.00	.00	0.	*	2 JAN 0830	83	.00	.00	.00	0.
1 JAN 1630	19	.00	.00	.00	0.	*	2 JAN 0845	84	.00	.00	.00	0.
1 JAN 1645	20	.00	.00	.00	0.	*	2 JAN 0900	85	.00	.00	.00	0.
1 JAN 1700	21	.00	.00	.00	0.	*	2 JAN 0915	86	.00	.00	.00	0.
1 JAN 1715	22	.00	.00	.00	0.	*	2 JAN 0930	87	.00	.00	.00	0.
1 JAN 1730	23	.00	.00	.00	0.	*	2 JAN 0945	88	.00	.00	.00	0.
1 JAN 1745	24	.00	.00	.00	0.	*	2 JAN 1000	89	.00	.00	.00	0.
1 JAN 1800	25	.00	.00	.00	0.	*	2 JAN 1015	90	.00	.00	.00	0.
1 JAN 1815	26	.01	.00	.00	0.	*	2 JAN 1030	91	.00	.00	.00	0.
1 JAN 1830	27	.01	.00	.00	0.	*	2 JAN 1045	92	.00	.00	.00	0.
1 JAN 1845	28	.00	.00	.00	0.	*	2 JAN 1100	93	.00	.00	.00	0.
1 JAN 1900	29	.01	.00	.00	0.	*	2 JAN 1115	94	.00	.00	.00	0.
1 JAN 1915	30	.00	.00	.00	0.	*	2 JAN 1130	95	.00	.00	.00	0.
1 JAN 1930	31	.01	.00	.00	0.	*	2 JAN 1145	96	.00	.00	.00	0.
1 JAN 1945	32	.01	.00	.00	0.	*	2 JAN 1200	97	.00	.00	.00	0.
1 JAN 2000	33	.00	.00	.00	0.	*	2 JAN 1215	98	.00	.00	.00	0.
1 JAN 2015	34	.01	.01	.00	0.	*	2 JAN 1230	99	.00	.00	.00	0.
1 JAN 2030	35	.01	.01	.00	0.	*	2 JAN 1245	100	.00	.00	.00	0.
1 JAN 2045	36	.01	.01	.00	0.	*	2 JAN 1300	101	.00	.00	.00	0.
1 JAN 2100	37	.01	.01	.00	0.	*	2 JAN 1315	102	.00	.00	.00	0.
1 JAN 2115	38	.01	.01	.00	0.	*	2 JAN 1330	103	.00	.00	.00	0.
1 JAN 2130	39	.01	.01	.00	0.	*	2 JAN 1345	104	.00	.00	.00	0.
1 JAN 2145	40	.01	.01	.00	0.	*	2 JAN 1400	105	.00	.00	.00	0.
1 JAN 2200	41	.01	.01	.00	0.	*	2 JAN 1415	106	.00	.00	.00	0.
1 JAN 2215	42	.01	.01	.00	0.	*	2 JAN 1430	107	.00	.00	.00	0.
1 JAN 2230	43	.01	.01	.00	0.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.02	.01	.00	0.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.02	.01	.00	0.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.02	.02	.00	0.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.02	.02	.00	0.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.10	.09	.01	0.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	.28	.25	.03	0.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.04	.03	.00	1.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.04	.03	.00	1.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.02	.02	.00	1.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.02	.02	.00	0.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.01	.01	.00	0.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.01	.01	.00	0.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.01	.01	.00	0.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.01	.01	.00	0.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.01	.01	.00	0.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.01	.01	.00	0.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.01	.01	.00	0.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.01	.01	.00	0.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.01	.01	.00	0.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.01	.01	.00	0.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.01	.01	.00	0.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.01	.01	.00	0.	*						

TOTAL RAINFALL = 1.00, TOTAL LOSS = .90, TOTAL EXCESS = .10

PEAK FLOW TIME MAXIMUM AVERAGE FLOW
+ (CFS) (HR) 6-HR 24-HR 72-HR 32.00-HR
(CFS)

+	1.	12.50	0.	0.	0.	0.
		(INCHES)	.070	.100	.101	.101
		(AC-FT)	0.	0.	0.	0.

CUMULATIVE AREA = .03 SQ MI

WARNING *** TIME INTERVAL IS GREATER THAN .29*LAG

HYDROGRAPH AT STATION BSN2
PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q	*	DA	MON	HRMN	ORD	RAIN	LOSS	EXCESS	COMP Q
1	JAN	1200	1	.00	.00	.00	0.	*	2	JAN	0415	66	.04	.01	.03	3.
1	JAN	1215	2	.02	.02	.00	0.	*	2	JAN	0430	67	.03	.01	.03	3.
1	JAN	1230	3	.02	.02	.00	0.	*	2	JAN	0445	68	.04	.01	.03	3.
1	JAN	1245	4	.02	.01	.00	0.	*	2	JAN	0500	69	.03	.01	.03	2.
1	JAN	1300	5	.02	.02	.00	0.	*	2	JAN	0515	70	.04	.01	.03	2.
1	JAN	1315	6	.02	.02	.00	0.	*	2	JAN	0530	71	.03	.01	.03	2.
1	JAN	1330	7	.02	.02	.00	0.	*	2	JAN	0545	72	.04	.01	.03	2.
1	JAN	1345	8	.02	.01	.00	0.	*	2	JAN	0600	73	.03	.01	.03	2.
1	JAN	1400	9	.02	.02	.00	0.	*	2	JAN	0615	74	.04	.01	.03	2.
1	JAN	1415	10	.02	.02	.00	0.	*	2	JAN	0630	75	.03	.01	.03	2.
1	JAN	1430	11	.03	.03	.00	0.	*	2	JAN	0645	76	.03	.01	.03	2.
1	JAN	1445	12	.02	.02	.00	0.	*	2	JAN	0700	77	.04	.01	.03	2.
1	JAN	1500	13	.02	.02	.00	0.	*	2	JAN	0715	78	.03	.01	.03	2.
1	JAN	1515	14	.02	.02	.00	0.	*	2	JAN	0730	79	.04	.01	.03	2.
1	JAN	1530	15	.03	.03	.00	0.	*	2	JAN	0745	80	.03	.01	.03	2.
1	JAN	1545	16	.02	.02	.00	0.	*	2	JAN	0800	81	.04	.01	.03	2.
1	JAN	1600	17	.02	.02	.00	0.	*	2	JAN	0815	82	.02	.00	.02	2.
1	JAN	1615	18	.03	.03	.00	0.	*	2	JAN	0830	83	.02	.00	.02	2.
1	JAN	1630	19	.03	.03	.00	0.	*	2	JAN	0845	84	.02	.00	.02	2.
1	JAN	1645	20	.03	.03	.00	0.	*	2	JAN	0900	85	.02	.00	.02	2.
1	JAN	1700	21	.03	.03	.00	0.	*	2	JAN	0915	86	.02	.00	.02	1.
1	JAN	1715	22	.03	.03	.00	0.	*	2	JAN	0930	87	.02	.00	.02	1.
1	JAN	1730	23	.03	.03	.00	0.	*	2	JAN	0945	88	.02	.00	.02	1.
1	JAN	1745	24	.03	.03	.00	0.	*	2	JAN	1000	89	.02	.00	.02	1.
1	JAN	1800	25	.03	.03	.00	0.	*	2	JAN	1015	90	.02	.00	.02	1.
1	JAN	1815	26	.04	.04	.00	0.	*	2	JAN	1030	91	.02	.00	.02	1.
1	JAN	1830	27	.04	.04	.00	0.	*	2	JAN	1045	92	.02	.00	.02	1.
1	JAN	1845	28	.04	.04	.00	0.	*	2	JAN	1100	93	.02	.00	.02	1.
1	JAN	1900	29	.04	.04	.00	0.	*	2	JAN	1115	94	.02	.00	.02	1.
1	JAN	1915	30	.04	.04	.00	0.	*	2	JAN	1130	95	.02	.00	.02	1.
1	JAN	1930	31	.04	.04	.00	0.	*	2	JAN	1145	96	.02	.00	.02	1.
1	JAN	1945	32	.04	.04	.00	0.	*	2	JAN	1200	97	.02	.00	.02	1.
1	JAN	2000	33	.04	.04	.00	0.	*	2	JAN	1215	98	.00	.00	.00	1.
1	JAN	2015	34	.05	.05	.01	0.	*	2	JAN	1230	99	.00	.00	.00	1.
1	JAN	2030	35	.05	.05	.01	0.	*	2	JAN	1245	100	.00	.00	.00	1.
1	JAN	2045	36	.05	.04	.01	0.	*	2	JAN	1300	101	.00	.00	.00	0.
1	JAN	2100	37	.05	.05	.01	0.	*	2	JAN	1315	102	.00	.00	.00	0.
1	JAN	2115	38	.06	.05	.01	0.	*	2	JAN	1330	103	.00	.00	.00	0.
1	JAN	2130	39	.06	.05	.01	1.	*	2	JAN	1345	104	.00	.00	.00	0.
1	JAN	2145	40	.07	.05	.02	1.	*	2	JAN	1400	105	.00	.00	.00	0.
1	JAN	2200	41	.07	.05	.02	1.	*	2	JAN	1415	106	.00	.00	.00	0.
1	JAN	2215	42	.09	.07	.03	1.	*	2	JAN	1430	107	.00	.00	.00	0.

1 JAN 2230	43	.09	.06	.03	1.	*	2 JAN 1445	108	.00	.00	.00	0.
1 JAN 2245	44	.12	.08	.04	1.	*	2 JAN 1500	109	.00	.00	.00	0.
1 JAN 2300	45	.12	.08	.04	2.	*	2 JAN 1515	110	.00	.00	.00	0.
1 JAN 2315	46	.19	.12	.07	2.	*	2 JAN 1530	111	.00	.00	.00	0.
1 JAN 2330	47	.19	.11	.08	3.	*	2 JAN 1545	112	.00	.00	.00	0.
1 JAN 2345	48	.81	.40	.41	4.	*	2 JAN 1600	113	.00	.00	.00	0.
2 JAN 0000	49	2.15	.71	1.44	12.	*	2 JAN 1615	114	.00	.00	.00	0.
2 JAN 0015	50	.28	.07	.21	25.	*	2 JAN 1630	115	.00	.00	.00	0.
2 JAN 0030	51	.28	.06	.22	32.	*	2 JAN 1645	116	.00	.00	.00	0.
2 JAN 0045	52	.15	.03	.12	30.	*	2 JAN 1700	117	.00	.00	.00	0.
2 JAN 0100	53	.14	.03	.11	23.	*	2 JAN 1715	118	.00	.00	.00	0.
2 JAN 0115	54	.11	.02	.09	17.	*	2 JAN 1730	119	.00	.00	.00	0.
2 JAN 0130	55	.10	.02	.08	13.	*	2 JAN 1745	120	.00	.00	.00	0.
2 JAN 0145	56	.09	.02	.07	10.	*	2 JAN 1800	121	.00	.00	.00	0.
2 JAN 0200	57	.08	.02	.06	8.	*	2 JAN 1815	122	.00	.00	.00	0.
2 JAN 0215	58	.06	.01	.05	7.	*	2 JAN 1830	123	.00	.00	.00	0.
2 JAN 0230	59	.05	.01	.04	5.	*	2 JAN 1845	124	.00	.00	.00	0.
2 JAN 0245	60	.06	.01	.05	5.	*	2 JAN 1900	125	.00	.00	.00	0.
2 JAN 0300	61	.05	.01	.04	4.	*	2 JAN 1915	126	.00	.00	.00	0.
2 JAN 0315	62	.06	.01	.05	4.	*	2 JAN 1930	127	.00	.00	.00	0.
2 JAN 0330	63	.05	.01	.04	3.	*	2 JAN 1945	128	.00	.00	.00	0.
2 JAN 0345	64	.06	.01	.05	3.	*	2 JAN 2000	129	.00	.00	.00	0.
2 JAN 0400	65	.05	.01	.04	3.	*						

*

TOTAL RAINFALL = 7.80, TOTAL LOSS = 3.36, TOTAL EXCESS = 4.44

PEAK FLOW (CFS)	TIME (HR)	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
32.	12.50	9.	3.	2.	2.
(INCHES)		3.464	4.431	4.441	4.441
(AC-FT)		5.	6.	6.	6.

CUMULATIVE AREA = .03 SQ MI

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*
190 KK * POND1 *
*

HYDROGRAPH ROUTING DATA

191 RS STORAGE ROUTING
NSTPS 1 NUMBER OF SUBREACHES
ITYP ELEV TYPE OF INITIAL CONDITION
RSVRIC 162.00 INITIAL CONDITION
X .00 WORKING R AND D COEFFICIENT

192 SA AREA .4 .4 .5 .6

193 SE	ELEVATION	170.00	171.00	172.00	173.00						
194 SQ	DISCHARGE	0.	3.	6.	10.	13.	16.	19.	22.	26.	29.
		32.									
196 SE	ELEVATION	170.00	170.17	170.27	170.35	170.42	170.49	170.56	170.62	170.67	170.73
		170.80									

COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	.39	.85	1.38
ELEVATION	170.00	171.00	172.00	173.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	.06	.10	.13	.16	.18	.21	.24	.26	.28
OUTFLOW	.00	3.20	6.40	9.60	12.80	16.00	19.20	22.40	25.60	28.80
ELEVATION	170.00	170.17	170.27	170.35	170.42	170.49	170.56	170.62	170.67	170.73

STORAGE	.31	.39	.85	1.38
OUTFLOW	32.00	41.14	86.85	132.56
ELEVATION	170.80	171.00	172.00	173.00

*** WARNING *** MODIFIED PULS ROUTING MAY BE NUMERICALLY UNSTABLE FOR OUTFLOWS BETWEEN 6. TO 87.
 THE ROUTED HYDROGRAPH SHOULD BE EXAMINED FOR OSCILLATIONS OR OUTFLOWS GREATER THAN PEAK INFLOWS.
 THIS CAN BE CORRECTED BY DECREASING THE TIME INTERVAL OR INCREASING STORAGE (USE A LONGER REACH.)

HYDROGRAPH AT STATION POND1 PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE	DA	MON	HRMN	ORD	OUTFLOW	STORAGE	STAGE		
1	JAN	1200	1	0.	.0	170.0	*	1	JAN	2245	44	1.	.0	170.1	*	2	JAN	0930	87	1.	.0	170.1
1	JAN	1215	2	0.	.0	170.0	*	1	JAN	2300	45	1.	.0	170.1	*	2	JAN	0945	88	1.	.0	170.1
1	JAN	1230	3	0.	.0	170.0	*	1	JAN	2315	46	2.	.0	170.1	*	2	JAN	1000	89	1.	.0	170.1
1	JAN	1245	4	0.	.0	170.0	*	1	JAN	2330	47	2.	.0	170.1	*	2	JAN	1015	90	1.	.0	170.1
1	JAN	1300	5	0.	.0	170.0	*	1	JAN	2345	48	3.	.1	170.2	*	2	JAN	1030	91	1.	.0	170.1
1	JAN	1315	6	0.	.0	170.0	*	2	JAN	0000	49	8.	.1	170.3	*	2	JAN	1045	92	1.	.0	170.1
1	JAN	1330	7	0.	.0	170.0	*	2	JAN	0015	50	19.	.2	170.6	*	2	JAN	1100	93	1.	.0	170.1
1	JAN	1345	8	0.	.0	170.0	*	2	JAN	0030	51	30.	.3	170.8	*	2	JAN	1115	94	1.	.0	170.1
1	JAN	1400	9	0.	.0	170.0	*	2	JAN	0045	52	31.	.3	170.8	*	2	JAN	1130	95	1.	.0	170.1
1	JAN	1415	10	0.	.0	170.0	*	2	JAN	0100	53	26.	.3	170.7	*	2	JAN	1145	96	1.	.0	170.1
1	JAN	1430	11	0.	.0	170.0	*	2	JAN	0115	54	19.	.2	170.6	*	2	JAN	1200	97	1.	.0	170.1
1	JAN	1445	12	0.	.0	170.0	*	2	JAN	0130	55	15.	.2	170.5	*	2	JAN	1215	98	1.	.0	170.1
1	JAN	1500	13	0.	.0	170.0	*	2	JAN	0145	56	11.	.1	170.4	*	2	JAN	1230	99	1.	.0	170.1
1	JAN	1515	14	0.	.0	170.0	*	2	JAN	0200	57	9.	.1	170.3	*	2	JAN	1245	100	1.	.0	170.1
1	JAN	1530	15	0.	.0	170.0	*	2	JAN	0215	58	7.	.1	170.3	*	2	JAN	1300	101	1.	.0	170.0
1	JAN	1545	16	0.	.0	170.0	*	2	JAN	0230	59	6.	.1	170.3	*	2	JAN	1315	102	0.	.0	170.0
1	JAN	1600	17	0.	.0	170.0	*	2	JAN	0245	60	5.	.1	170.2	*	2	JAN	1330	103	0.	.0	170.0
1	JAN	1615	18	0.	.0	170.0	*	2	JAN	0300	61	4.	.1	170.2	*	2	JAN	1345	104	0.	.0	170.0
1	JAN	1630	19	0.	.0	170.0	*	2	JAN	0315	62	4.	.1	170.2	*	2	JAN	1400	105	0.	.0	170.0
1	JAN	1645	20	0.	.0	170.0	*	2	JAN	0330	63	4.	.1	170.2	*	2	JAN	1415	106	0.	.0	170.0
1	JAN	1700	21	0.	.0	170.0	*	2	JAN	0345	64	3.	.1	170.2	*	2	JAN	1430	107	0.	.0	170.0
1	JAN	1715	22	0.	.0	170.0	*	2	JAN	0400	65	3.	.1	170.2	*	2	JAN	1445	108	0.	.0	170.0

1 JAN 1730	23	0.	.0	170.0 *	2 JAN 0415	66	3.	.1	170.2 *	2 JAN 1500	109	0.	.0	170.0
1 JAN 1745	24	0.	.0	170.0 *	2 JAN 0430	67	3.	.1	170.2 *	2 JAN 1515	110	0.	.0	170.0
1 JAN 1800	25	0.	.0	170.0 *	2 JAN 0445	68	3.	.1	170.1 *	2 JAN 1530	111	0.	.0	170.0
1 JAN 1815	26	0.	.0	170.0 *	2 JAN 0500	69	3.	.0	170.1 *	2 JAN 1545	112	0.	.0	170.0
1 JAN 1830	27	0.	.0	170.0 *	2 JAN 0515	70	2.	.0	170.1 *	2 JAN 1600	113	0.	.0	170.0
1 JAN 1845	28	0.	.0	170.0 *	2 JAN 0530	71	2.	.0	170.1 *	2 JAN 1615	114	0.	.0	170.0
1 JAN 1900	29	0.	.0	170.0 *	2 JAN 0545	72	2.	.0	170.1 *	2 JAN 1630	115	0.	.0	170.0
1 JAN 1915	30	0.	.0	170.0 *	2 JAN 0600	73	2.	.0	170.1 *	2 JAN 1645	116	0.	.0	170.0
1 JAN 1930	31	0.	.0	170.0 *	2 JAN 0615	74	2.	.0	170.1 *	2 JAN 1700	117	0.	.0	170.0
1 JAN 1945	32	0.	.0	170.0 *	2 JAN 0630	75	2.	.0	170.1 *	2 JAN 1715	118	0.	.0	170.0
1 JAN 2000	33	0.	.0	170.0 *	2 JAN 0645	76	2.	.0	170.1 *	2 JAN 1730	119	0.	.0	170.0
1 JAN 2015	34	0.	.0	170.0 *	2 JAN 0700	77	2.	.0	170.1 *	2 JAN 1745	120	0.	.0	170.0
1 JAN 2030	35	0.	.0	170.0 *	2 JAN 0715	78	2.	.0	170.1 *	2 JAN 1800	121	0.	.0	170.0
1 JAN 2045	36	0.	.0	170.0 *	2 JAN 0730	79	2.	.0	170.1 *	2 JAN 1815	122	0.	.0	170.0
1 JAN 2100	37	0.	.0	170.0 *	2 JAN 0745	80	2.	.0	170.1 *	2 JAN 1830	123	0.	.0	170.0
1 JAN 2115	38	0.	.0	170.0 *	2 JAN 0800	81	2.	.0	170.1 *	2 JAN 1845	124	0.	.0	170.0
1 JAN 2130	39	0.	.0	170.0 *	2 JAN 0815	82	2.	.0	170.1 *	2 JAN 1900	125	0.	.0	170.0
1 JAN 2145	40	1.	.0	170.0 *	2 JAN 0830	83	2.	.0	170.1 *	2 JAN 1915	126	0.	.0	170.0
1 JAN 2200	41	1.	.0	170.0 *	2 JAN 0845	84	2.	.0	170.1 *	2 JAN 1930	127	0.	.0	170.0
1 JAN 2215	42	1.	.0	170.0 *	2 JAN 0900	85	2.	.0	170.1 *	2 JAN 1945	128	0.	.0	170.0
1 JAN 2230	43	1.	.0	170.0 *	2 JAN 0915	86	2.	.0	170.1 *	2 JAN 2000	129	0.	.0	170.0

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
+	(HR)				
	(CFS)				
+	31.	12.75	9.	3.	2.
	(INCHES)	3.460	4.430	4.441	4.441
	(AC-FT)	5.	6.	6.	6.

PEAK STORAGE	TIME	MAXIMUM AVERAGE STORAGE			
		6-HR	24-HR	72-HR	32.00-HR
+	(AC-FT)				
	(HR)				
	0.	12.75	0.	0.	0.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	32.00-HR
+	(FEET)				
	(HR)				
	170.78	12.75	170.31	170.11	170.08

CUMULATIVE AREA = .03 SQ MI

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198 KK * 3PD183 *

199 HC HYDROGRAPH COMBINATION

ICOMP 3 NUMBER OF HYDROGRAPHS TO COMBINE

HYDROGRAPH AT STATION 3PD1&3

SUM OF 3 HYDROGRAPHS

PLAN 1, RATIO = 7.80

DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW	*	DA	MON	HRMN	ORD	FLOW
					*						*						*					
1	JAN	1200	1	133.	*	1	JAN	2015	34	201.	*	2	JAN	0430	67	225.	*	2	JAN	1245	100	203.
1	JAN	1215	2	194.	*	1	JAN	2030	35	201.	*	2	JAN	0445	68	222.	*	2	JAN	1300	101	203.
1	JAN	1230	3	194.	*	1	JAN	2045	36	201.	*	2	JAN	0500	69	220.	*	2	JAN	1315	102	202.
1	JAN	1245	4	194.	*	1	JAN	2100	37	201.	*	2	JAN	0515	70	218.	*	2	JAN	1330	103	202.
1	JAN	1300	5	194.	*	1	JAN	2115	38	201.	*	2	JAN	0530	71	216.	*	2	JAN	1345	104	202.
1	JAN	1315	6	194.	*	1	JAN	2130	39	202.	*	2	JAN	0545	72	215.	*	2	JAN	1400	105	201.
1	JAN	1330	7	194.	*	1	JAN	2145	40	202.	*	2	JAN	0600	73	214.	*	2	JAN	1415	106	201.
1	JAN	1345	8	195.	*	1	JAN	2200	41	202.	*	2	JAN	0615	74	213.	*	2	JAN	1430	107	201.
1	JAN	1400	9	196.	*	1	JAN	2215	42	202.	*	2	JAN	0630	75	212.	*	2	JAN	1445	108	201.
1	JAN	1415	10	197.	*	1	JAN	2230	43	203.	*	2	JAN	0645	76	211.	*	2	JAN	1500	109	201.
1	JAN	1430	11	197.	*	1	JAN	2245	44	203.	*	2	JAN	0700	77	210.	*	2	JAN	1515	110	201.
1	JAN	1445	12	198.	*	1	JAN	2300	45	204.	*	2	JAN	0715	78	210.	*	2	JAN	1530	111	201.
1	JAN	1500	13	198.	*	1	JAN	2315	46	205.	*	2	JAN	0730	79	209.	*	2	JAN	1545	112	201.
1	JAN	1515	14	199.	*	1	JAN	2330	47	206.	*	2	JAN	0745	80	209.	*	2	JAN	1600	113	201.
1	JAN	1530	15	199.	*	1	JAN	2345	48	210.	*	2	JAN	0800	81	208.	*	2	JAN	1615	114	201.
1	JAN	1545	16	199.	*	2	JAN	0000	49	225.	*	2	JAN	0815	82	208.	*	2	JAN	1630	115	201.
1	JAN	1600	17	200.	*	2	JAN	0015	50	252.	*	2	JAN	0830	83	208.	*	2	JAN	1645	116	201.
1	JAN	1615	18	200.	*	2	JAN	0030	51	270.	*	2	JAN	0845	84	207.	*	2	JAN	1700	117	201.
1	JAN	1630	19	200.	*	2	JAN	0045	52	269.	*	2	JAN	0900	85	207.	*	2	JAN	1715	118	201.
1	JAN	1645	20	200.	*	2	JAN	0100	53	257.	*	2	JAN	0915	86	206.	*	2	JAN	1730	119	201.
1	JAN	1700	21	200.	*	2	JAN	0115	54	246.	*	2	JAN	0930	87	206.	*	2	JAN	1745	120	201.
1	JAN	1715	22	200.	*	2	JAN	0130	55	239.	*	2	JAN	0945	88	205.	*	2	JAN	1800	121	201.
1	JAN	1730	23	200.	*	2	JAN	0145	56	235.	*	2	JAN	1000	89	205.	*	2	JAN	1815	122	201.
1	JAN	1745	24	201.	*	2	JAN	0200	57	232.	*	2	JAN	1015	90	205.	*	2	JAN	1830	123	201.
1	JAN	1800	25	201.	*	2	JAN	0215	58	232.	*	2	JAN	1030	91	205.	*	2	JAN	1845	124	201.
1	JAN	1815	26	201.	*	2	JAN	0230	59	231.	*	2	JAN	1045	92	205.	*	2	JAN	1900	125	201.
1	JAN	1830	27	201.	*	2	JAN	0245	60	231.	*	2	JAN	1100	93	205.	*	2	JAN	1915	126	201.
1	JAN	1845	28	201.	*	2	JAN	0300	61	231.	*	2	JAN	1115	94	205.	*	2	JAN	1930	127	201.
1	JAN	1900	29	201.	*	2	JAN	0315	62	231.	*	2	JAN	1130	95	205.	*	2	JAN	1945	128	201.
1	JAN	1915	30	201.	*	2	JAN	0330	63	231.	*	2	JAN	1145	96	204.	*	2	JAN	2000	129	201.
1	JAN	1930	31	201.	*	2	JAN	0345	64	230.	*	2	JAN	1200	97	204.	*					
1	JAN	1945	32	201.	*	2	JAN	0400	65	229.	*	2	JAN	1215	98	204.	*					
1	JAN	2000	33	201.	*	2	JAN	0415	66	227.	*	2	JAN	1230	99	204.	*					
					*						*						*					

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW			
		6-HR	24-HR	72-HR	32.00-HR
+	(CFS)				
+	270.	234.	211.	208.	208.
	(INCHES)	3.868	13.983	18.337	18.337
	(AC-FT)	116.	419.	550.	550.

CUMULATIVE AREA = .56 SQ MI

*** **



200 KK

*
* POND2 *
*

HYDROGRAPH ROUTING DATA

201 RS	STORAGE ROUTING										
	NSTPS	1	NUMBER OF SUBREACHES								
	ITYP	ELEV	TYPE OF INITIAL CONDITION								
	RSVRIC	158.00	INITIAL CONDITION								
	X	.00	WORKING R AND D COEFFICIENT								
202 SA	AREA	2.1	2.2	2.4	2.5						
203 SE	ELEVATION	166.00	167.00	168.00	169.00						
204 SQ	DISCHARGE	0. 269.	27.	54.	81.	108.	135.	161.	188.	215.	242.
206 SE	ELEVATION	166.00 168.30	166.50	166.79	167.03	167.25	167.45	167.63	167.81	167.98	168.14



COMPUTED STORAGE-ELEVATION DATA

STORAGE	.00	2.15	4.46	6.92
ELEVATION	166.00	167.00	168.00	169.00

COMPUTED STORAGE-OUTFLOW-ELEVATION DATA

STORAGE	.00	1.06	1.69	2.15	2.22	2.72	3.17	3.59	4.01	4.41
OUTFLOW	.00	26.90	53.80	77.34	80.70	107.60	134.50	161.40	188.30	215.20
ELEVATION	166.00	166.50	166.79	167.00	167.03	167.25	167.45	167.63	167.81	167.98
STORAGE	4.46	4.79	5.18	6.92						
OUTFLOW	218.56	242.10	269.00	386.68						
ELEVATION	168.00	168.14	168.30	169.00						

HYDROGRAPH AT STATION POND2
PLAN 1, RATIO = 7.80

DA MON HRMN ORD					OUTFLOW					STORAGE					STAGE				
1 JAN 1200					1					0.					166.0				
1 JAN 1215					2					92.					167.1				
1 JAN 1230					3					170.					167.7				
1 JAN 1245					4					189.					167.8				
1 JAN 1300					5					193.					167.8				
1 JAN 1315					6					194.					167.8				
1 JAN 1330					7					194.					167.8				
1 JAN 2245					44					203.					167.9				
1 JAN 2300					45					204.					167.9				
1 JAN 2315					46					204.					167.9				
1 JAN 2330					47					205.					167.9				
1 JAN 2345					48					208.					167.9				
2 JAN 0000					49					215.					168.0				
2 JAN 0015					50					235.					168.1				
2 JAN 0930					87					206.					167.9				
2 JAN 0945					88					206.					167.9				
2 JAN 1000					89					205.					167.9				
2 JAN 1015					90					205.					167.9				
2 JAN 1030					91					205.					167.9				
2 JAN 1045					92					205.					167.9				
2 JAN 1100					93					205.					167.9				

1 JAN 1345	8	195.	4.1	167.9 *	2 JAN 0030	51	257.	5.0	168.2 *	2 JAN 1115	94	205.	4.3	167.9
1 JAN 1400	9	195.	4.1	167.9 *	2 JAN 0045	52	267.	5.2	168.3 *	2 JAN 1130	95	205.	4.3	167.9
1 JAN 1415	10	196.	4.1	167.9 *	2 JAN 0100	53	264.	5.1	168.3 *	2 JAN 1145	96	205.	4.3	167.9
1 JAN 1430	11	197.	4.1	167.9 *	2 JAN 0115	54	253.	5.0	168.2 *	2 JAN 1200	97	204.	4.3	167.9
1 JAN 1445	12	197.	4.1	167.9 *	2 JAN 0130	55	244.	4.8	168.2 *	2 JAN 1215	98	204.	4.2	167.9
1 JAN 1500	13	198.	4.2	167.9 *	2 JAN 0145	56	238.	4.7	168.1 *	2 JAN 1230	99	204.	4.2	167.9
1 JAN 1515	14	198.	4.2	167.9 *	2 JAN 0200	57	234.	4.7	168.1 *	2 JAN 1245	100	204.	4.2	167.9
1 JAN 1530	15	199.	4.2	167.9 *	2 JAN 0215	58	232.	4.7	168.1 *	2 JAN 1300	101	203.	4.2	167.9
1 JAN 1545	16	199.	4.2	167.9 *	2 JAN 0230	59	232.	4.6	168.1 *	2 JAN 1315	102	202.	4.2	167.9
1 JAN 1600	17	199.	4.2	167.9 *	2 JAN 0245	60	231.	4.6	168.1 *	2 JAN 1330	103	202.	4.2	167.9
1 JAN 1615	18	200.	4.2	167.9 *	2 JAN 0300	61	231.	4.6	168.1 *	2 JAN 1345	104	202.	4.2	167.9
1 JAN 1630	19	200.	4.2	167.9 *	2 JAN 0315	62	231.	4.6	168.1 *	2 JAN 1400	105	201.	4.2	167.9
1 JAN 1645	20	200.	4.2	167.9 *	2 JAN 0330	63	231.	4.6	168.1 *	2 JAN 1415	106	201.	4.2	167.9
1 JAN 1700	21	200.	4.2	167.9 *	2 JAN 0345	64	231.	4.6	168.1 *	2 JAN 1430	107	201.	4.2	167.9
1 JAN 1715	22	200.	4.2	167.9 *	2 JAN 0400	65	230.	4.6	168.1 *	2 JAN 1445	108	201.	4.2	167.9
1 JAN 1730	23	200.	4.2	167.9 *	2 JAN 0415	66	228.	4.6	168.1 *	2 JAN 1500	109	201.	4.2	167.9
1 JAN 1745	24	200.	4.2	167.9 *	2 JAN 0430	67	226.	4.6	168.0 *	2 JAN 1515	110	201.	4.2	167.9
1 JAN 1800	25	201.	4.2	167.9 *	2 JAN 0445	68	224.	4.5	168.0 *	2 JAN 1530	111	201.	4.2	167.9
1 JAN 1815	26	201.	4.2	167.9 *	2 JAN 0500	69	222.	4.5	168.0 *	2 JAN 1545	112	201.	4.2	167.9
1 JAN 1830	27	201.	4.2	167.9 *	2 JAN 0515	70	219.	4.5	168.0 *	2 JAN 1600	113	201.	4.2	167.9
1 JAN 1845	28	201.	4.2	167.9 *	2 JAN 0530	71	218.	4.4	168.0 *	2 JAN 1615	114	201.	4.2	167.9
1 JAN 1900	29	201.	4.2	167.9 *	2 JAN 0545	72	216.	4.4	168.0 *	2 JAN 1630	115	201.	4.2	167.9
1 JAN 1915	30	201.	4.2	167.9 *	2 JAN 0600	73	215.	4.4	168.0 *	2 JAN 1645	116	201.	4.2	167.9
1 JAN 1930	31	201.	4.2	167.9 *	2 JAN 0615	74	214.	4.4	168.0 *	2 JAN 1700	117	201.	4.2	167.9
1 JAN 1945	32	201.	4.2	167.9 *	2 JAN 0630	75	213.	4.4	168.0 *	2 JAN 1715	118	201.	4.2	167.9
1 JAN 2000	33	201.	4.2	167.9 *	2 JAN 0645	76	212.	4.4	168.0 *	2 JAN 1730	119	201.	4.2	167.9
1 JAN 2015	34	201.	4.2	167.9 *	2 JAN 0700	77	211.	4.3	168.0 *	2 JAN 1745	120	201.	4.2	167.9
1 JAN 2030	35	201.	4.2	167.9 *	2 JAN 0715	78	210.	4.3	167.9 *	2 JAN 1800	121	201.	4.2	167.9
1 JAN 2045	36	201.	4.2	167.9 *	2 JAN 0730	79	210.	4.3	167.9 *	2 JAN 1815	122	201.	4.2	167.9
1 JAN 2100	37	201.	4.2	167.9 *	2 JAN 0745	80	209.	4.3	167.9 *	2 JAN 1830	123	201.	4.2	167.9
1 JAN 2115	38	201.	4.2	167.9 *	2 JAN 0800	81	209.	4.3	167.9 *	2 JAN 1845	124	201.	4.2	167.9
1 JAN 2130	39	202.	4.2	167.9 *	2 JAN 0815	82	208.	4.3	167.9 *	2 JAN 1900	125	201.	4.2	167.9
1 JAN 2145	40	202.	4.2	167.9 *	2 JAN 0830	83	208.	4.3	167.9 *	2 JAN 1915	126	201.	4.2	167.9
1 JAN 2200	41	202.	4.2	167.9 *	2 JAN 0845	84	207.	4.3	167.9 *	2 JAN 1930	127	201.	4.2	167.9
1 JAN 2215	42	202.	4.2	167.9 *	2 JAN 0900	85	207.	4.3	167.9 *	2 JAN 1945	128	201.	4.2	167.9
1 JAN 2230	43	203.	4.2	167.9 *	2 JAN 0915	86	206.	4.3	167.9 *	2 JAN 2000	129	201.	4.2	167.9

PEAK FLOW	TIME	MAXIMUM AVERAGE FLOW				
		6-HR	24-HR	72-HR	32.00-HR	
+	(CFS)					
		(CFS)				
+	267.	12.75	234.	211.	206.	206.
		(INCHES)	3.867	13.983	18.197	18.197
		(AC-FT)	116.	419.	545.	545.

PEAK STORAGE		MAXIMUM AVERAGE STORAGE			
TIME		6-HR	24-HR	72-HR	32.00-HR
+	(AC-FT)				
	(HR)				
	5.	12.75	5.	4.	4.

PEAK STAGE	TIME	MAXIMUM AVERAGE STAGE			
		6-HR	24-HR	72-HR	32.00-HR
+ (FEET)	(HR)				
+ 8.29	12.75	168.09	167.95	167.92	167.92

CUMULATIVE AREA = .56 SQ MI

PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
 FLOWS IN CUBIC FEET PER SECOND, AREA IN SQUARE MILES
 TIME TO PEAK IN HOURS



OPERATION	STATION	AREA	PLAN	RATIOS APPLIED TO PRECIPITATION	
				RATIO 1	
					7.80

HYDROGRAPH AT

+	BSN5	.02	1	FLOW	32.
				TIME	12.50

ROUTED TO

+	POND7	.02	1	FLOW	12.
				TIME	13.50

** PEAK STAGES IN FEET **

1	STAGE	171.83
	TIME	13.50

HYDROGRAPH AT

+	BSN4	.02	1	FLOW	22.
				TIME	12.75

2 COMBINED AT

+	PD7&4	.04	1	FLOW	31.
				TIME	13.00

ROUTED TO

+	POND6	.04	1	FLOW	10.
				TIME	15.50

** PEAK STAGES IN FEET **

1	STAGE	172.05
	TIME	15.50

HYDROGRAPH AT

+	BSN7	.05	1	FLOW	61.
				TIME	12.75

2 COMBINED AT

+	7PD6	.10	1	FLOW	64.
				TIME	12.75

ROUTED TO

+	POND5	.10	1	FLOW	35.
				TIME	13.75

** PEAK STAGES IN FEET **

1	STAGE	168.73
	TIME	13.75

HYDROGRAPH AT

+	BSN6	.01	1	FLOW	12.
				TIME	12.50

ROUTED TO

+	RTE6	.01	1	FLOW	12.
---	------	-----	---	------	-----



TIME 13.25

HYDROGRAPH AT



OFFST .36 1 FLOW 273.
TIME 13.50

HYDROGRAPH AT

+

BSN8 .03 1 FLOW 40.
TIME 12.25

4 COMBINED AT

+

608P5 .49 1 FLOW 326.
TIME 13.50

ROUTED TO

+

POND4 .49 1 FLOW 232.
TIME 14.50

** PEAK STAGES IN FEET **

1 STAGE 168.71
TIME 14.50

HYDROGRAPH AT

+

BSN10 .02 1 FLOW 27.
TIME 12.50

2 COMBINED AT

+

10PD4 .51 1 FLOW 236.
TIME 14.50

ROUTED TO

+

POND3 .51 1 FLOW 224.
TIME 15.50

** PEAK STAGES IN FEET **

1 STAGE 168.52
TIME 15.50

HYDROGRAPH AT

+

BSN3 .02 1 FLOW 33.
TIME 12.50

HYDROGRAPH AT

+

BSN2 .03 1 FLOW 32.
TIME 12.50

ROUTED TO

+

POND1 .03 1 FLOW 31.
TIME 12.75

** PEAK STAGES IN FEET **

1 STAGE 170.78
TIME 12.75

COMBINED AT

+

3PD1&3 .56 1 FLOW 270.
TIME 12.50

ROUTED TO

+

POND2 .56 1 FLOW 267.

TIME 12.75

** PEAK STAGES IN FEET **

1	STAGE	168.29
	TIME	12.75

*** NORMAL END OF HEC-1 ***

SWS1									
100	j,	168.0000	100	1	11	10			
110	t,	Fontana	SWS	Line	#1				
120	i,	160	0.00	0.00	0.00	0.00	3.22	15.00	175.00
130	i,	150	0.00	0.00	0.00	0.00	1.54	15.00	175.00
140	i,	140	0.00	0.00	0.00	0.00	2.34	15.00	174.00
150	i,	133	0.00	0.00	0.00	0.00	1.54	15.00	176.50
160	i,	132	0.00	0.00	0.00	0.00	2.31	15.00	175.00
170	i,	120	0.00	0.00	0.00	0.00	3.73	15.00	173.75
180	i,	121	0.00	0.00	0.00	0.00	2.03	15.00	174.00
190	i,	110	0.00	0.00	0.00	0.00	2.06	15.00	173.75
200	m,	131	177.25						
210	m,	130	176.00						
220	m,	100	168.00						
230	p,	160	150	210.00	15	0.013	0.00	0.00	
240	p,	150	140	200.00	15	0.013	0.00	60.00	
250	p,	140	130	200.00	18	0.013	0.00	0.00	
260	p,	133	132	140.00	15	0.013	0.00	0.00	
270	p,	132	131	210.00	15	0.013	0.00	90.00	
280	p,	131	130	330.00	15	0.013	0.00	90.00	
290	p,	130	120	160.00	24	0.013	0.00	0.00	
300	p,	121	120	50.00	15	0.013	0.00	0.00	
310	p,	120	110	35.00	30	0.013	0.00	90.00	
320	p,	110	100	70.00	30	0.013	0.00	0.00	
330	e								

STORM11.OUT

Date: 03-04-2004
Time: 07:50:43

Input File: c:\storm\sws1

Fontana SWS Line #1

Storm Frequency = 2-Year

* * * * * H Y D R O L O G Y * * *

```
*****
***** Tributary Area *****
***** to C Area Slope Length TC(0) I(0) Q(0) Q sum Q *****
***** ide (Ac) (%) (Ft) (Min) (In/Hr) (CFS) (CFS) (CFS) *****
*****
150 .00 .00 .00 .0 15.00 3.83 3.22 15.00 3.83 3.22 3.22
140 .00 .00 .00 .0 15.00 3.83 1.54 16.33 3.68 1.48 4.70
130 .00 .00 .00 .0 15.00 3.83 2.34 17.20 3.59 2.20 6.90
132 .00 .00 .00 .0 15.00 3.83 1.54 15.00 3.83 1.54 1.54
131 .00 .00 .00 .0 15.00 3.83 2.31 16.86 3.63 2.19 3.73
130 .00 .00 .00 .0 .00 .00 .00 18.01 3.51 .00 3.73
120 .00 .00 .00 .0 .00 .00 .00 19.82 3.35 .00 10.31
120 .00 .00 .00 .0 15.00 3.83 2.03 15.00 3.83 2.03 2.03
110 .00 .00 .00 .0 15.00 3.83 3.73 20.63 3.28 3.20 15.27
100 .00 .00 .00 .0 15.00 3.83 2.06 20.82 3.27 1.76 17.03
*****
***** Conduit Data *****
***** Size velocity Length TT TT+TC *****
***** (In) (Ft/Sec) (Ft) (Min) (Min) *****
*****
15" 2.62 210.00 1.33 16.33
15" 3.83 200.00 .87 17.20
18" 3.90 200.00 .85 18.06
15" 1.25 140.00 1.86 16.86
15" 3.04 210.00 1.15 18.01
15" 3.04 330.00 1.81 19.82
24" 3.28 160.00 .81 20.63
15" 1.65 50.00 .50 15.50
30" 3.11 35.00 .19 20.82
30" 3.47 70.00 .34 21.16
*****
*****
```

Date: 03-04-2004
Time: 07:50:43

Input File: c:\storm\sws1

Fontana SWS Line #1

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * *

```
*****
Node   Hyd-Slope   Friction   Bend   Transition   Manhole   Deflection   Junction   Total   Hyd-GI   Desired   Diff.
      (Ft/Ft)      (Ft)        (Ft)      (Ft)        (Ft)        (Ft)        (Ft)        (Ft)      Elevation Elevation (Ft)
*****
160    .00248      .5218      .0000      .0000      .0000      .0000      .0000      .5218    171.7113  175.0000    3.29
150    .00530      1.0591      .0797      .0121      .0000      .0000      .0000      1.4127    171.1895  175.0000    3.81
140    .00431      .8619      .0000      .0009      .0000      .0000      .0000      1.0719    169.7768  174.0000    4.22
133    .00057      .0796      .0000      .0000      .0000      .0000      .0000      .0796     170.9076  176.5000    5.59
132    .00333      .6994      .0000      .0119      .0000      .0000      .0000      .9592     170.8281  175.0000    4.17
120    .00139      .0485      .0526      .0034      .0000      .0000      .0000      .1930     168.3984  173.7500    5.35
121    .00099      .0494      .0000      .0000      .0000      .0000      .0000      .0494     168.4478  174.0000    5.55
110    .00172      .1207      .0000      .0037      .0000      .0000      .0000      .2054     168.2054  173.7500    5.54
131    .00333      1.0991      .0410      .0000      .0072      .0000      .0167      1.1639    169.8689  177.2500    7.38
130    .00208      .3324      .0000      .0138      .0000      .0000      -.0397      .3065     168.7049  176.0000    7.30
100    .00000      .0000      .0000      .0000      .0000      .0000      .0000      .0000     168.0000  168.0000    .00
*****
```

100 j, 168.0000 200 1 2 1 SWS2
110 t, Fontana SWS Line #2
120 i, 210 0.00 0.00 0.00 0.00 3.39 15.00 172.00
130 m, 200 168.00
140 p, 210 200 150.00 15 0.013 0.00 0.00
150 e

Date: 03-04-2004
Time: 07:55:26

Input File: c:\storm\sws2

Fontana SWS Line #2

Storm Frequency = 2-Year

* * * H Y D R O L O G Y * * *

```
*****
***** Tributary Area *****
***** C Area Slope Length TC(0) I(0) Q(0) *****
***** Node (AC) (%) (FT) (Min) (In/Hr) (CFS) *****
***** 210 200 .00 .00 .0 15.00 3.83 3.39 3.39 3.39 *****
*****
***** Hydrology Summation *****
***** TC I Q Sum Q *****
***** (Min) (In/Hr) (CFS) (CFS) *****
***** 15.00 3.83 3.39 3.39 *****
*****
***** Conduit Data *****
***** Size Velocity Length TT TT+TC *****
***** (Min) (Ft) (Min) (Min) *****
***** 15" 2.76 150.00 .91 15.91 *****
*****
```

STORM12.OUT

Date: 03-04-2004
Time: 07:55:26

Input File: c:\storm\sws2

Fontana SWS Line #2

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * *

```
*****
Node  Hyd-Slope  Friction  Bend  Transition  Manhole  Deflection  Junction  Total  Hyd-GI  Desired  Diff.
      (Ft/Ft)    (Ft)      (Ft)    (Ft)      (Ft)      (Ft)      (Ft)      (Ft)      Elevation  Elevation  (Ft)
*****
10    .00275    .4131    .0000    .0000    .0000    .0000    .0000    .4131    168.4131  172.0000  3.59
00    .00000    .0000    .0000    .0000    .0000    .0000    .0000    .0000    168.0000  168.0000  .00
*****
```

100	j,	164.0000	300	1	5	4	SWS3		
110	t,	Fontana SWS	Line #3						
120	i,	340	0.00	0.00	0.00	0.00	1.46	15.00	175.00
130	i,	330	0.00	0.00	0.00	0.00	2.46	15.00	171.00
140	i,	320	0.00	0.00	0.00	0.00	4.48	15.00	171.75
150	i,	310	0.00	0.00	0.00	0.00	1.79	15.00	171.75
160	m,	300	164.00						
170	p,	340	330	310.00	15	0.013	0.00	0.00	
180	p,	330	320	165.00	15	0.013	0.00	0.00	
190	p,	320	310	30.00	18	0.013	0.00	0.00	
200	p,	310	300	170.00	24	0.013	0.00	0.00	
210	e								

Date: 03-04-2004
Time: 08:01:35

Input File: c:\storm\sws3

Fontana SWS Line #3

Storm Frequency = 2-Year

HYDROLOGY

Node to Node		Tributary Area				Hydrology Summation				Conduit Data				TT+TC (Min)		
Node	C	Area (AC)	Slope (%)	Length (Ft)	TC (Min)	I (In/Hr)	Q (CFS)	TC (Min)	I (In/Hr)	Q (CFS)	Sum Q (CFS)	Size	Velocity (Ft/Sec)	Length (Ft)	TT (Min)	TT+TC (Min)
340	330	.00	.00	.0	15.00	3.83	1.46	15.00	3.83	1.46	1.46	15"	1.19	310.00	4.34	19.34
330	320	.00	.00	.0	15.00	3.83	2.46	19.34	3.39	2.18	3.64	15"	2.97	165.00	.93	20.27
320	310	.00	.00	.0	15.00	3.83	4.48	20.27	3.31	3.87	7.51	18"	4.25	30.00	.12	20.39
310	300	.00	.00	.0	15.00	3.83	1.79	20.39	3.30	1.54	9.06	24"	2.88	170.00	.98	21.37

STORM12.OUT

Date: 03-04-2004
Time: 08:01:35

Input File: c:\storm\sws3

Fontana SWS Line #3

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * * *

Node	Hyd-Slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-Gl Elevation	Desired Elevation	Diff.
40	.00051	.1584	.0000	.0000	.0000	.0000	.0000	.1584	165.8059	175.0000	9.19
30	.00317	.5235	.0000	.0115	.0000	.0000	.2387	.7737	165.6475	171.0000	5.35
20	.00512	.1535	.0000	.0144	.0000	.0000	.4603	.6282	164.8739	171.7500	6.88
10	.00160	.2725	.0000	.0303	.0000	.0000	-.0571	.2457	164.2457	171.7500	7.50
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	164.0000	164.0000	.00

100 j, 164.0000 400 1 4 3 SWS4
 110 t, Fontana SWS Line #4
 120 i, 430 0.00 0.00 0.00 0.00 2.40 15.00 173.00
 130 i, 420 0.00 0.00 0.00 0.00 2.19 15.00 168.65
 140 i, 410 0.00 0.00 0.00 0.00 1.11 15.00 168.65
 150 m, 400 164.00
 160 p, 430 420 200.00 15 0.013 0.00 0.00
 170 p, 420 410 35.00 15 0.013 0.00 45.00
 180 p, 410 400 180.00 18 0.013 0.00 45.00
 190 e

Date: 03-04-2004
Time: 08:05:57

Input File: c:\storm\sws4

Fontana SWS Line #4

Storm Frequency = 2-Year

HYDROLOGY * * * * *

Tributary Area										Hydrology				Conduit				Data	
Node to	C	Area (AC)	slope (%)	Length (Ft)	TC(O) (Min)	I(O) (In/Hr)	Q(O) (CFS)	TC (Min)	I (In/Hr)	Q (CFS)	Sum Q	Size	velocity (Ft/Sec)	Length (Ft)	TT (Min)	TT+TC (Min)			
430	420	.00	.00	.0	15.00	3.83	2.40	15.00	3.83	2.40	2.40	15"	1.96	200.00	1.70	16.70			
420	410	.00	.00	.0	15.00	3.83	2.19	16.70	3.64	2.08	4.48	15"	3.65	35.00	.16	16.86			
410	400	.00	.00	.0	15.00	3.83	1.11	16.86	3.63	1.05	5.53	18"	3.13	180.00	.96	17.82			

STORM12.OUT

Date: 03-04-2004
Time: 08:05:57

Input File: c:\storm\sws4

Fontana SWS Line #4

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * * *

Node	Hyd-Slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-GJ Elevation	Desired Elevation	Diff.
30	.00138	.2761	.0000	.0000	.0000	.0000	.0000	.2761	165.3721	173.0000	7.63
20	.00482	.1686	.0513	.0148	.0000	.0000	.3118	.5465	165.0961	168.6500	3.55
10	.00278	.4997	.0000	.0110	.0000	.0000	.0389	.5496	164.5496	168.6500	4.10
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	164.0000	164.0000	.00

SWS5

100	j,	164.0000	500	1	6	5			
110	t,	Fontana SWS	Line #5						
120	i,	540	0.00	0.00	0.00	0.00	1.65	15.00	168.00
130	i,	531	0.00	0.00	0.00	0.00	1.63	15.00	168.00
140	i,	520	0.00	0.00	0.00	0.00	1.29	15.00	169.88
150	i,	510	0.00	0.00	0.00	0.00	1.74	15.00	169.88
160	m,	530	168.50						
170	m,	500	164.00						
180	p,	540 530	130.00	15	0.013	0.00	90.00		
190	p,	531 530	85.00	15	0.013	0.00	90.00		
200	p,	530 520	140.00	15	0.013	0.00	0.00		
210	p,	520 510	35.00	15	0.013	0.00	10.00		
220	p,	510 500	170.00	15	0.013	0.00	10.00		
230	e								

Date: 03-04-2004
Time: 14:17:07

Input File: c:\storm\sws5

Fontana SWS Line #5

Storm Frequency = 2-Year

* * * H Y D R O L O G Y * * *

```
*****
***** Tributary Area *****
***** C Area Slope Length TC(O) I(O) Q(O) Q(O) *****
***** Node (AC) (%) (Ft) (Min) (In/Hr) (CFS) (CFS) *****
*****
540 530 .00 .00 .0 15.00 3.83 1.65 1.65 1.65
531 530 .00 .00 .0 15.00 3.83 1.63 1.63 1.63
530 520 .00 .00 .0 .00 .00 .00 3.25
520 510 .00 .00 .0 15.00 3.83 1.29 1.29 1.20
510 500 .00 .00 .0 15.00 3.83 1.74 1.74 1.61
*****
***** Conduit Data *****
***** size velocity length TT TT+TC *****
***** (in) (ft/sec) (ft) (min) (min) *****
*****
15" 1.34 130.00 1.61 16.61
15" 1.33 85.00 1.07 16.07
15" 2.65 140.00 .88 17.49
15" 3.63 35.00 .16 17.65
15" 4.94 170.00 .57 18.22
*****
*****
*****
*****
```

STORM12.OUT

Date: 03-04-2004
Time: 14:18:31

Input File: c:\storm\sws5

Fontana SWS Line #5

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * * *

Node	Hyd-Slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-Gl Elevation	Desired Elevation	Diff.
40	.00065	.0848	.0098	.0000	.0000	.0000	.0000	.0946	166.8849	168.0000	1.12
31	.00064	.0541	.0000	.0000	.0000	.0000	.0000	.0541	166.8444	168.0000	1.16
20	.00476	.1665	.0239	.0095	.0000	.0000	.2095	.4094	166.3111	169.8800	3.57
10	.00882	1.4998	.0000	.0175	.0000	.0000	.3845	1.9017	165.9017	169.8800	3.98
00	.00254	.3554	.0000	.0081	.0000	.0000	.1157	.4792	166.7903	168.5000	1.71
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	164.0000	164.0000	.00

SWS6

100 j,	165.0000	600	1	7	6			
110 t,	Fontana SWS Line #6							
120 i,	660	0.00	0.00	0.00	0.00	2.11	15.00	173.00
130 i,	650	0.00	0.00	0.00	0.00	1.46	15.00	172.00
140 i,	640	0.00	0.00	0.00	0.00	2.54	15.00	171.00
150 i,	630	0.00	0.00	0.00	0.00	3.65	15.00	170.88
160 i,	620	0.00	0.00	0.00	0.00	4.00	15.00	170.88
170 m,	610	168.50						
180 m,	600	165.00						
190 p,	660	650	170.00	15	0.013	0.00	0.00	
200 p,	650	640	245.00	15	0.013	0.00	0.00	
210 p,	640	630	280.00	18	0.013	0.00	30.00	
220 p,	630	620	35.00	24	0.013	0.00	0.00	
230 p,	620	610	150.00	24	0.013	0.00	0.00	
240 p,	610	600	70.00	24	0.013	0.00	60.00	
250 e								

Date: 03-04-2004
Time: 08:22:55

Input File: c:\storm\sws6

Fontana SWS Line #6

Storm Frequency = 2-Year

* * * H Y D R O L O G Y * * *

```
*****
***** Tributary Area *****
***** c Area slope Length TC(0) I(0) Q(0) *****
***** Node ***** (AC) (%) (Ft) (Min) (In/Hr) (CFS) *****
*****
60 650 .00 .00 .0 15.00 3.83 2.11 15.00 3.83 2.11 2.11
50 640 .00 .00 .0 15.00 3.83 1.46 16.65 3.65 1.39 3.50
40 630 .00 .00 .0 15.00 3.83 2.54 18.08 3.51 2.33 5.83
30 620 .00 .00 .0 15.00 3.83 3.65 19.49 3.38 3.22 9.05
20 610 .00 .00 .0 15.00 3.83 4.00 19.70 3.36 3.51 12.56
10 600 .00 .00 .0 .00 .00 .00 20.32 3.31 .00 12.56
*****
***** Conduit Data *****
***** Size Velocity Length TT TT+TC *****
***** (In) (Ft/Sec) (Ft) (Min) (Min) *****
*****
15" 1.72 170.00 1.65 16.65
15" 2.85 245.00 1.43 18.08
18" 3.30 280.00 1.42 19.49
24" 2.88 35.00 .20 19.70
24" 4.00 150.00 .63 20.32
24" 4.00 70.00 .29 20.61
*****
*****
```

STORM12.OUT

Date: 03-04-2004
Time: 08:22:55

Input File: c:\storm\sws6

Fontana SWS Line #6

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * * *

Node	Hyd-Slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-Gl Elevation	Desired Elevation	Diff.
60	.00107	.1814	.0000	.0000	.0000	.0000	.0000	.1814	168.3182	173.0000	4.68
50	.00294	.7197	.0000	.0080	.0000	.0000	.1713	.8991	168.1368	172.0000	3.86
40	.00308	.8617	.0341	.0042	.0000	.0000	.2068	1.1069	167.2377	171.0000	3.76
30	.00160	.0560	.0000	.0080	.0000	.0000	.0984	.1624	166.1308	170.8800	4.75
20	.00308	.4622	.0000	.0119	.0000	.0000	.2508	.7249	165.9684	170.8800	4.91
10	.00308	.2157	.0000	.0000	.0124	.0000	.0154	.2435	165.2435	168.5000	3.26
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	165.0000	165.0000	.00

100	j,	164.0000	700	1	8	7				SWS7
110	t,	Fontana	SWS	Line	#7					
120	i,	750	0.00	0.00	0.00	0.00	2.20	15.00	171.00	
130	i,	740	0.00	0.00	0.00	0.00	1.97	15.00	169.00	
140	i,	742	0.00	0.00	0.00	0.00	1.51	15.00	170.88	
150	i,	741	0.00	0.00	0.00	0.00	1.34	15.00	170.88	
160	i,	730	0.00	0.00	0.00	0.00	1.79	15.00	169.00	
170	i,	720	0.00	0.00	0.00	0.00	1.19	15.00	170.88	
180	i,	710	0.00	0.00	0.00	0.00	1.29	15.00	170.88	
190	m,	700	164.00							
200	p,	750	740	275.00	15	0.013	0.00	0.00		
210	p,	742	741	35.00	15	0.013	0.00	0.00		
220	p,	741	740	140.00	15	0.013	0.00	0.00		
230	p,	740	730	175.00	18	0.013	0.00	90.00		
240	p,	730	720	200.00	18	0.013	0.00	0.00		
250	p,	720	710	35.00	24	0.013	0.00	0.00		
260	p,	710	700	185.00	24	0.013	0.00	0.00		
270	e									

Date: 03-04-2004
Time: 08:45:56

Input File: c:\storm\sws7

Fontana SWS Line #7

Storm Frequency = 2-Year

* * * * * H Y D R O L O G Y * * *

```
*****
***** Tributary Area *****
***** C Area Slope Length TC(O) I(O) Q(O) Q(O) *****
***** Node (Ac) (%) (Ft) (Min) (In/Hr) (CFS) (CFS) (CFS) *****
*****
750 740 .00 .00 .0 15.00 3.83 2.20 15.00 3.83 2.20 2.20
742 741 .00 .00 .0 15.00 3.83 1.51 15.00 3.83 1.51 1.51
741 740 .00 .00 .0 15.00 3.83 1.34 15.47 3.77 1.32 2.83
740 730 .00 .00 .0 15.00 3.83 1.97 17.56 3.56 1.83 6.78
730 720 .00 .00 .0 15.00 3.83 1.79 18.32 3.48 1.63 8.41
720 710 .00 .00 .0 15.00 3.83 1.19 19.02 3.42 1.06 9.47
710 700 .00 .00 .0 15.00 3.83 1.29 19.21 3.40 1.15 10.62
*****
***** Conduit Data *****
***** Size Velocity Length TT TT+TC *****
***** (In) (Ft/Sec) (Ft) (Min) (Min) *****
*****
15" 1.79 275.00 2.56 17.56
15" 1.23 35.00 .47 15.47
15" 2.31 140.00 1.01 16.49
18" 3.84 175.00 .76 18.32
18" 4.76 200.00 .70 19.02
24" 3.01 35.00 .19 19.21
24" 3.38 185.00 .91 20.12
*****
```

STORM12.OUT

Date: 03-04-2004
Time: 08:47:10

Input File: c:\storm\sws7

Fontana SWS Line #7

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * * *

Node	Hyd-Slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-Gl Elevation	Desired Elevation	Diff.
50	.00116	.3190	.0000	.0000	.0000	.0000	.0000	.3190	167.5178	171.0000	3.48
40	.00416	.7285	.0799	.0146	.0000	.0000	.3377	1.1607	167.1989	169.0000	1.80
42	.00055	.0191	.0000	.0000	.0000	.0000	.0000	.0191	167.6175	170.8800	3.26
41	.00192	.2689	.0000	.0059	.0000	.0000	.1247	.3995	167.5984	170.8800	3.28
30	.00640	1.2808	.0000	.0123	.0000	.0000	.2729	1.5660	166.0382	169.0000	2.96
20	.00175	.0613	.0000	.0421	.0000	.0000	-.1247	-.0213	164.4722	170.8800	6.41
10	.00220	.4074	.0000	.0036	.0000	.0000	.0825	.4935	164.4935	170.8800	6.39
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	164.0000	164.0000	.00

SWS8

100 j,	168.0000	800	1	7	6			
110 t,	Fontana SWS Line #8							
120 i,	850	0.00	0.00	0.00	0.00	0.00	1.96	15.00 178.72
130 i,	840	0.00	0.00	0.00	0.00	0.00	1.83	15.00 178.72
140 i,	831	0.00	0.00	0.00	0.00	0.00	2.06	15.00 176.00
150 i,	830	0.00	0.00	0.00	0.00	0.00	2.48	15.00 174.50
160 i,	820	0.00	0.00	0.00	0.00	0.00	1.05	15.00 175.97
170 i,	810	0.00	0.00	0.00	0.00	0.00	1.06	15.00 175.97
180 m,	800	168.00						
190 p,	850 840	30.00	15	0.013	0.00	0.00		
200 p,	840 830	155.00	15	0.013	0.00	0.00		
210 p,	831 830	290.00	15	0.013	0.00	0.00		
220 p,	830 820	150.00	18	0.013	0.00	90.00		
230 p,	820 810	30.00	24	0.013	0.00	10.00		
240 p,	810 800	200.00	24	0.013	0.00	10.00		
250 e								

Date: 03-04-2004
Time: 14:21:07

Input File: c:\storm\sws8

Fontana SWS Line #8

Storm Frequency = 2-Year

* * * H Y D R O L O G Y * * *

```
*****
***** Tributary Area *****
***** C Area Slope Length TC(0) I(0) Q(0) *****
***** Node (AC) (%) (Ft) (Min) (In/Hr) (CFS) *****
*****
850 840 .00 .00 .0 15.00 3.83 1.96 15.00 3.83 1.96 1.96
340 830 .00 .00 .0 15.00 3.83 1.83 15.31 3.79 1.81 3.77
331 830 .00 .00 .0 15.00 3.83 2.06 15.00 3.83 2.06 2.06
330 820 .00 .00 .0 15.00 3.83 2.48 17.88 3.53 2.28 7.94
320 810 .00 .00 .0 15.00 3.83 1.05 18.44 3.47 .95 8.89
310 800 .00 .00 .0 15.00 3.83 1.06 18.61 3.46 .96 9.85
*****
***** Conduit Data *****
***** Size Velocity Length TT TT+TC *****
***** (In) (Ft/Sec) (Ft) (Min) (Min) *****
*****
15" 1.60 30.00 .31 15.31
15" 3.07 155.00 .84 16.15
15" 1.68 290.00 2.88 17.88
18" 4.49 150.00 .56 18.44
24" 2.83 30.00 .18 18.61
24" 3.13 200.00 1.06 19.68
*****
```

STORM12.OUT

Date: 03-04-2004
Time: 14:21:07

Input File: c:\storm\sws8

Fontana SWS Line #8

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * *

ode	Hyd-slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-Gl Elevation	Desired Elevation	Diff.
50	.00092	.0276	.0000	.0000	.0000	.0000	.0000	.0276	170.6571	178.7200	8.06
40	.00341	.5287	.0000	.0107	.0000	.0000	.2256	.7650	170.6295	178.7200	8.09
31	.00102	.2949	.0000	.0000	.0000	.0000	.0000	.2949	170.1594	176.0000	5.84
30	.00571	.8566	.1097	.0167	.0000	.0000	.4509	1.4338	169.8645	174.5000	4.64
20	.00154	.0463	.0145	.0378	.0000	.0000	-.1149	-.0163	168.4306	175.9700	7.54
10	.00189	.3790	.0000	.0028	.0000	.0000	.0651	.4469	168.4469	175.9700	7.52
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	168.0000	168.0000	.00

100	j,	167.0000	900	1	8	7	SWS9		
110	t,	Fontana	SWS Line #9						
120	i,	960	0.00	0.00	0.00	0.00	0.00	1.89	15.00 171.50
130	i,	950	0.00	0.00	0.00	0.00	0.00	1.65	15.00 171.50
140	i,	941	0.00	0.00	0.00	0.00	0.00	1.09	15.00 174.00
150	i,	930	0.00	0.00	0.00	0.00	0.00	2.54	15.00 171.00
160	i,	920	0.00	0.00	0.00	0.00	0.00	1.43	15.00 173.13
170	i,	910	0.00	0.00	0.00	0.00	0.00	1.62	15.00 173.13
180	m,	940	171.50						
190	m,	900	167.00						
200	p,	960 950	165.00	15	0.013	0.00	0.00		
210	p,	950 940	230.00	15	0.013	0.00	0.00		
220	p,	941 940	175.00	15	0.013	0.00	30.00		
230	p,	940 930	65.00	15	0.013	0.00	0.00		
240	p,	930 920	135.00	18	0.013	0.00	45.00		
250	p,	920 910	35.00	18	0.013	0.00	0.00		
260	p,	910 900	200.00	24	0.013	0.00	0.00		
270	e								

Date: 03-04-2004
Time: 09:02:35

Input File: c:\storm\sws9

Fontana SWS Line #9

Storm Frequency = 2-Year

* * * H Y D R O L O G Y * *

```
*****
***** Tributary Area *****
***** C Area Slope Length TC(0) I(0) Q(0) *****
***** (AC) (%) (Ft) (Min) (In/Hr) (CFS) *****
*****
60 950 .00 .00 .0 15.00 3.83 1.89 15.00 3.83 1.89 1.89
50 940 .00 .00 .0 15.00 3.83 1.65 16.79 3.63 1.57 3.46
41 940 .00 .00 .0 15.00 3.83 1.09 15.00 3.83 1.09 1.09
40 930 .00 .00 .0 .00 .00 .00 18.15 3.50 .00 4.54
30 920 .00 .00 .0 15.00 3.83 2.54 18.44 3.47 2.30 6.84
20 910 .00 .00 .0 15.00 3.83 1.43 19.02 3.42 1.28 8.12
10 900 .00 .00 .0 15.00 3.83 1.62 19.15 3.41 1.44 9.56
*****
***** Conduit Data *****
***** Size Velocity Length TT TT+TC *****
***** (In) (Ft/Sec) (Ft) (Min) (Min) *****
*****
15" 1.54 165.00 1.79 16.79
15" 2.82 230.00 1.36 18.15
15" .89 175.00 3.28 18.28
15" 3.70 65.00 .29 18.44
18" 3.87 135.00 .58 19.02
18" 4.59 35.00 .13 19.15
24" 3.04 200.00 1.10 20.24
*****
*****
```

STORM12.OUT

Date: 03-04-2004
Time: 09:03:29

Input File: c:\storm\sws9

Fontana SWS Line #9

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * *

Node	Hyd-slope (Ft/Ft)	Friction (Ft)	Bend (Ft)	Transition (Ft)	Manhole (Ft)	Deflection (Ft)	Junction (Ft)	Total (Ft)	Hyd-Gl Elevation	Desired Elevation	Diff.
60	.00086	.1412	.0000	.0000	.0000	.0000	.0000	.1412	170.0949	171.5000	1.41
50	.00286	.6584	.0000	.0086	.0000	.0000	.1823	.8493	169.9537	171.5000	1.55
41	.00028	.0498	.0000	.0000	.0000	.0000	.0000	.0498	169.1542	174.0000	4.85
30	.00424	.5727	.0576	.0020	.0000	.0000	.2247	.8571	168.6010	171.0000	2.40
20	.00597	.2091	.0000	.0095	.0000	.0000	.2159	.4345	167.7440	173.1300	5.39
10	.00179	.3572	.0000	.0368	.0000	.0000	-.0846	.3095	167.3095	173.1300	5.82
40	.00494	.3208	.0000	.0089	.0000	.0000	.1736	.5033	169.1044	171.5000	2.40
00	.00000	.0000	.0000	.0000	.0000	.0000	.0000	.0000	167.0000	167.0000	.00

SWS10

100	j,	165.0000	1000	1	4	3						
110	t,	Fontana	SWS Line #10									
120	i,	1030	0.00	0.00	0.00	0.00	0.00	1.00	15.00	171.71		
130	i,	1020	0.00	0.00	0.00	0.00	0.00	3.16	15.00	172.68		
140	i,	1010	0.00	0.00	0.00	0.00	0.00	3.57	15.00	172.68		
150	m,	1000	165.00									
160	p,	1030	1020	95.00	18	0.013	0.00	0.00				
170	p,	1020	1010	35.00	18	0.013	0.00	60.00				
180	p,	1010	1000	100.00	18	0.013	0.00	30.00				
190	e											

Date: 03-04-2004
Time: 09:07:08

Input File: c:\storm\sws10

Fontana SWS Line #10

Storm Frequency = 2-Year

* * * H Y D R O L O G Y * * *

```
*****
**** Tributary Area ****
**** C Area Slope Length TC(0) I(0) Q(0) ****
**** Node (AC) (%) (FT) (Min) (In/Hr) (CFS) ****
****
030 1020 .00 .00 .0 15.00 3.83 1.00 15.00 3.83 1.00 1.00
020 1010 .00 .00 .0 15.00 3.83 3.16 15.00 3.83 3.16 4.00
010 1000 .00 .00 .0 15.00 3.83 3.57 15.26 3.80 3.54 7.55
****
**** Conduit Data ****
**** Size Velocity Length TT TT+TC ****
**** (In) (Ft/Sec) (Ft) (Min) (Min) ****
****
18" .57 95.00 2.80 17.80
18" 2.27 35.00 .26 15.26
18" 4.27 100.00 .39 15.65
****
**** Hydrology Summation ****
**** TC I Q Sum Q ****
**** (Min) (In/Hr) (CFS) (CFS) ****
****
1.00 1.00 4.00 7.55
****
```

STORM12.OUT

Date: 03-04-2004
Time: 09:07:08

Input File: c:\storm\sws10

Fontana SWS Line #10

Storm Frequency = 2-Year

* * * H Y D R A U L I C S * *

```
*****
id  Hyd-slope Friction Bend Transition Manhole Deflection Junction Total Hyd-Gl Desired Diff.
(Ft/Ft)      (Ft)      (Ft)      (Ft)      (Ft)      (Ft)      (Ft)      (Ft)      (Ft)      (Ft)
*****
0   .00009   .0086   .0000   .0000   .0000   .0000   .0000   .0086   166.2036   171.7100   5.51
0   .00145   .0508   .0228   .0075   .0000   .0000   .0000   .2346   166.1950   172.6800   6.48
0   .00516   .5160   .0000   .0203   .0000   .0000   .0000   .9604   165.9604   172.6800   6.72
0   .00000   .0000   .0000   .0000   .0000   .0000   .0000   .0000   165.0000   165.0000   .00
*****
```

KS-2-5

County	Expected 24-hour Storm Rainfall in Inches						Normal Annual Precipitation Inches
	100	50	25	10	5	2	
Pawnee	6.6	6.0	5.2	4.5	3.7	2.8	23.3
Phillips	6.0	5.5	4.8	4.1	3.4	2.5	23.6
Pottawatomie	7.5	6.6	5.9	5.1	4.3	3.4	33.6
Pratt	7.2	6.4	5.6	4.8	4.1	3.0	24.6
Rawlins	5.5	5.0	4.3	3.6	3.1	2.3	21.0
Reno	7.4	6.6	5.8	5.0	4.2	3.2	27.7
Republic	6.8	6.0	5.4	4.6	3.9	2.9	28.6
Rice	7.3	6.4	5.6	4.8	4.1	3.0	26.6
Riley	7.4	6.5	5.8	5.1	4.3	3.3	33.5
Rooks	6.1	5.7	4.9	4.1	3.4	2.5	23.9
Rush	6.5	5.9	5.0	4.3	3.6	2.7	23.3
Russell	6.7	5.9	5.2	4.4	3.7	2.8	26.8
Saline	7.3	6.4	5.7	4.9	4.1	3.1	28.4
Scott	5.7	5.3	4.5	3.8	3.2	2.4	20.2
Sedgwick	7.8	7.0	6.1	5.3	4.5	3.5	30.6
Seward	6.0	5.7	4.8	4.2	3.5	2.6	19.8
Shawnee	7.8	6.8	6.1	5.3	4.5	3.5	34.7
Sheridan	5.7	5.3	4.5	3.8	3.2	2.4	21.3
Sherman	5.3	4.8	4.2	3.5	3.0	2.2	16.7
Smith	6.3	5.7	5.0	4.2	3.5	2.6	24.4
Stafford	7.1	6.2	5.5	4.7	4.0	2.9	25.1
Stanton	5.6	5.2	4.5	3.8	3.2	2.4	15.8
Stevens	5.9	5.5	4.7	4.1	3.4	2.5	19.7
Sumner	8.0	7.1	6.2	5.4	4.6	3.6	34.0

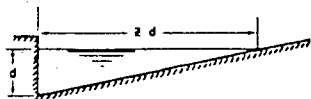
$$x\text{-slope} = \frac{3}{8} \frac{1}{ft} = 6.03125\%$$

$$z = \frac{1}{x\text{-slope}} = \frac{1}{6.03125} = 32$$

$$n = 0.016$$

$$\frac{z}{n} = \frac{32}{0.016} = 2000$$

always



$$\text{EQUATION: } Q = 0.56 \left(\frac{z}{n} \right)^{5/3} d^{8/3}$$

n IS ROUGHNESS COEFFICIENT IN METRIC FORMULA APPROPRIATE TO MATERIAL IN BOTTOM OF CHANNEL

z IS RECIPROCAL OF CROSS SLOPE

REFERENCE: H. R. B. PROCEEDINGS 1948, PAGE 150, EQUATION (14)

EXAMPLE (SEE INSTRUCTION 1)

GIVEN: $n = 0.03$

$z = 24$

$n = .02$

$Q = 20 \text{ CFS}$

$$\frac{z}{n} = 1200$$

FIND: $d = 0.22$ BY FOLLOWING DASHED LINES

RATIO $\frac{z}{n}$

TURNING LINE

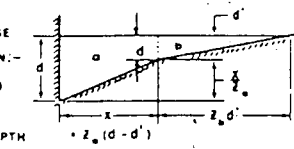
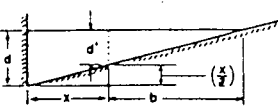
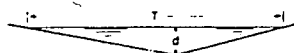
INSTRUCTIONS

1. CONNECT z/n RATIO WITH SLOPE (s) AND CONNECT DISCHARGE (Q) WITH POINT WHERE LINE CROSSES TURNING LINE READ DEPTH AT CURB (d) Q CAN BE FOUND FROM d BY CONNECTING d WITH CROSSING OF TURNING LINE

2. FOR SHALLOW V-SHAPED CHANNEL AS SHOWN USE NOMOGRAPH AS EXPLAINED IN INSTRUCTION 1 BUT WITH $z = \frac{T}{d}$

3. TO DETERMINE DISCHARGE Q_1 IN PORTION OF CHANNEL HAVING WIDTH x : DETERMINE DEPTH d FOR TOTAL DISCHARGE IN ENTIRE SECTION AS EXPLAINED IN 1. THEN USE NOMOGRAPH TO DETERMINE Q_0 IN SECTION OF WIDTH b FOR DEPTH $d' = d - \left(\frac{x}{z} \right)$. THEN $Q_1 = Q - Q_0$.

4. TO DETERMINE DISCHARGE (Q_1) IN COMPOSITE SECTION: FOLLOW INSTRUCTION 3. TO OBTAIN DISCHARGE (Q_0) IN SECTION a AT ASSUMED DEPTH d BASED ON AN EXTENSION OF SLOPE RATIO z_0 TO INTERSECT WATER SURFACE; OBTAIN Q_b FOR SLOPE RATIO z_b AND DEPTH d' ; $d' = d - \frac{x}{z_0}$. THEN $Q_1 = Q_0 + Q_b$.



DISCHARGE (Q) IN CFS

SLOPE OF CHANNEL (s) IN FT./FT.

DEPTH AT CURB OR DEEPEST POINT (d) IN FT.

$$L_T = 0.6Q^{0.42}S^{0.3}(1/nS_x)^{0.6}$$

FOR COMPOSITE CROSS SLOPES, USE S_e FOR S_x .

$$S_e = S_x + S_w E_o ; S_w = d/W$$

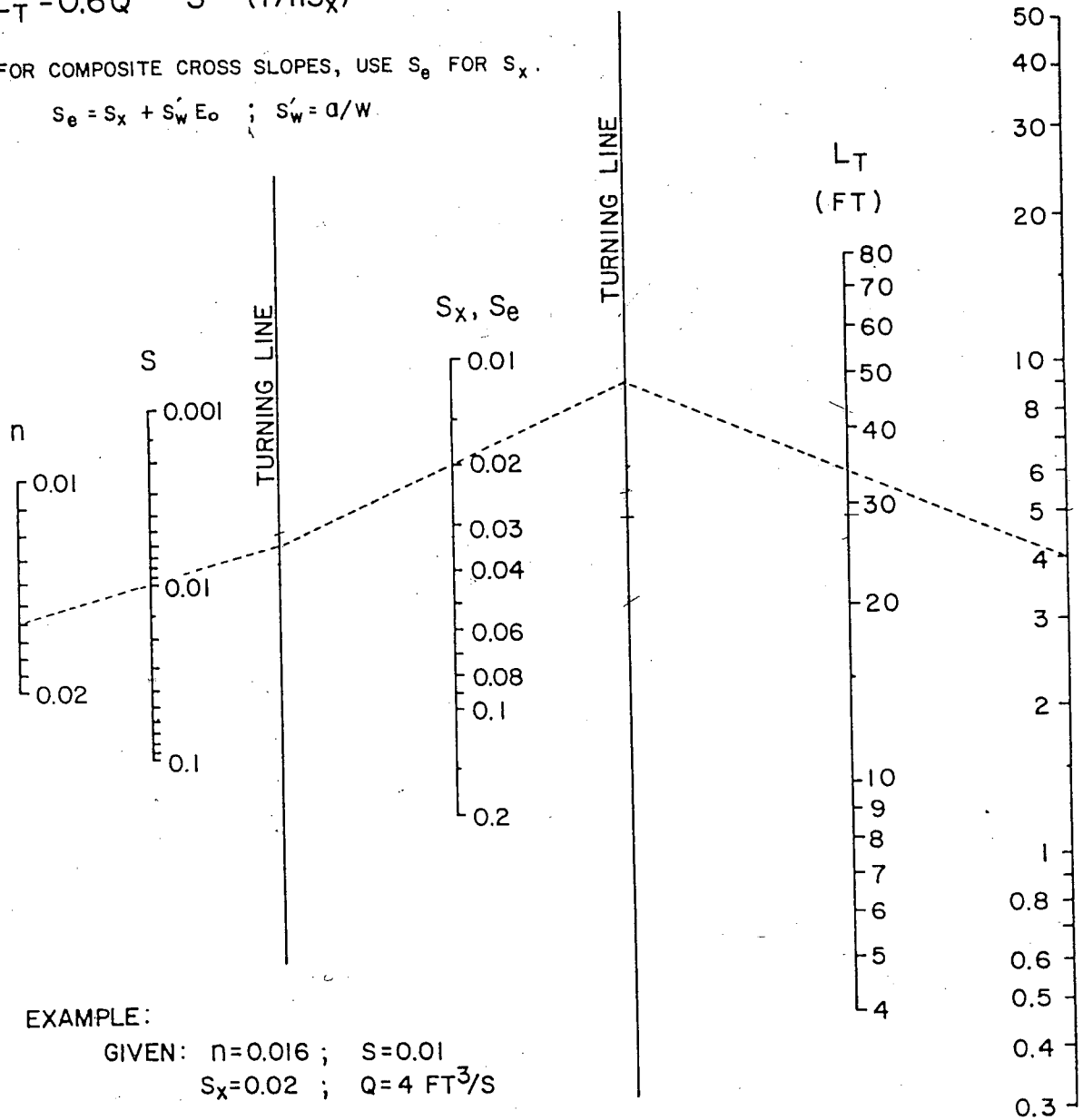


CHART 9. Curb-opening and slotted drain inlet length for total interception.

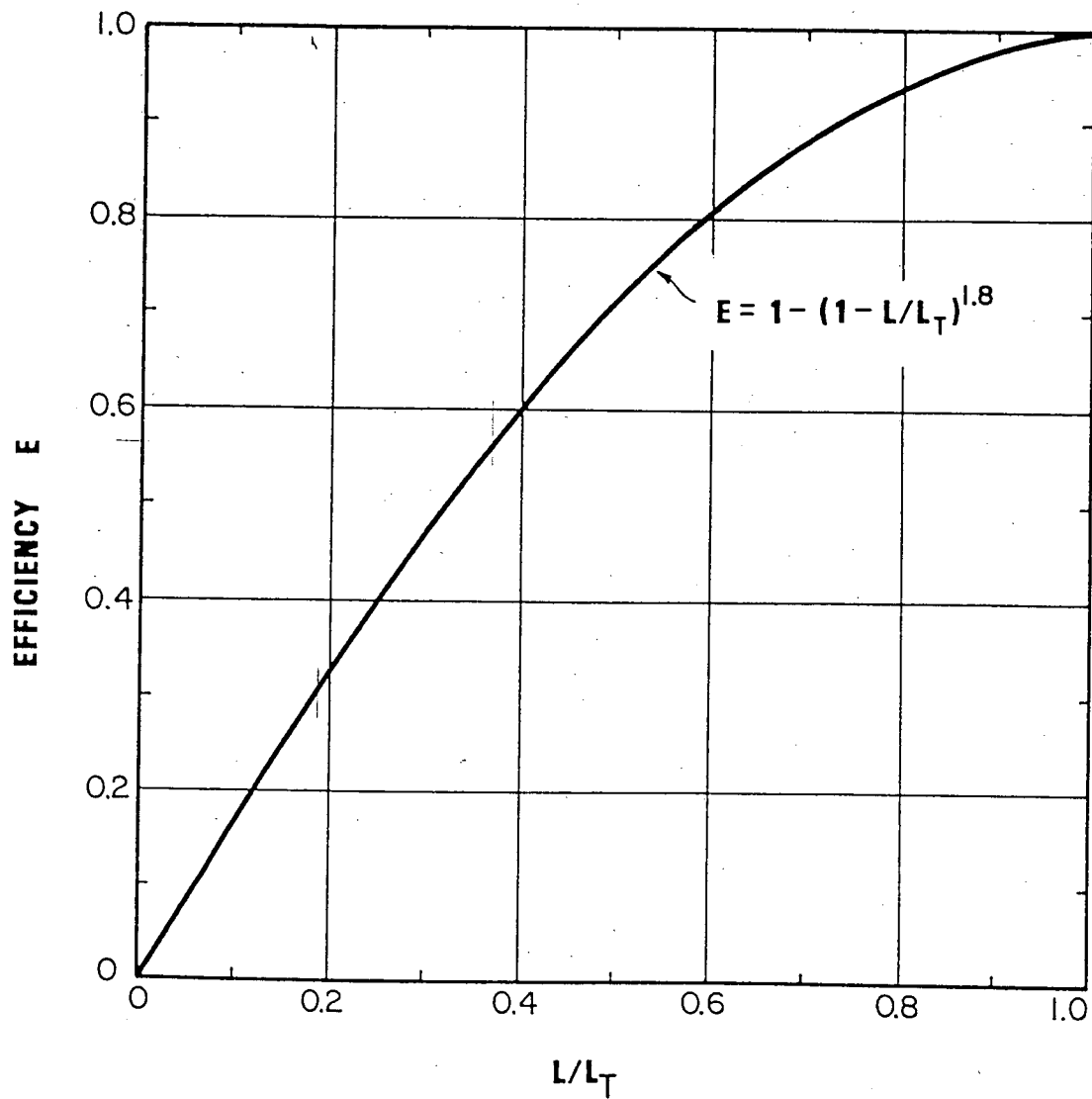


CHART 10. Curb-opening and slotted drain inlet interception efficiency.

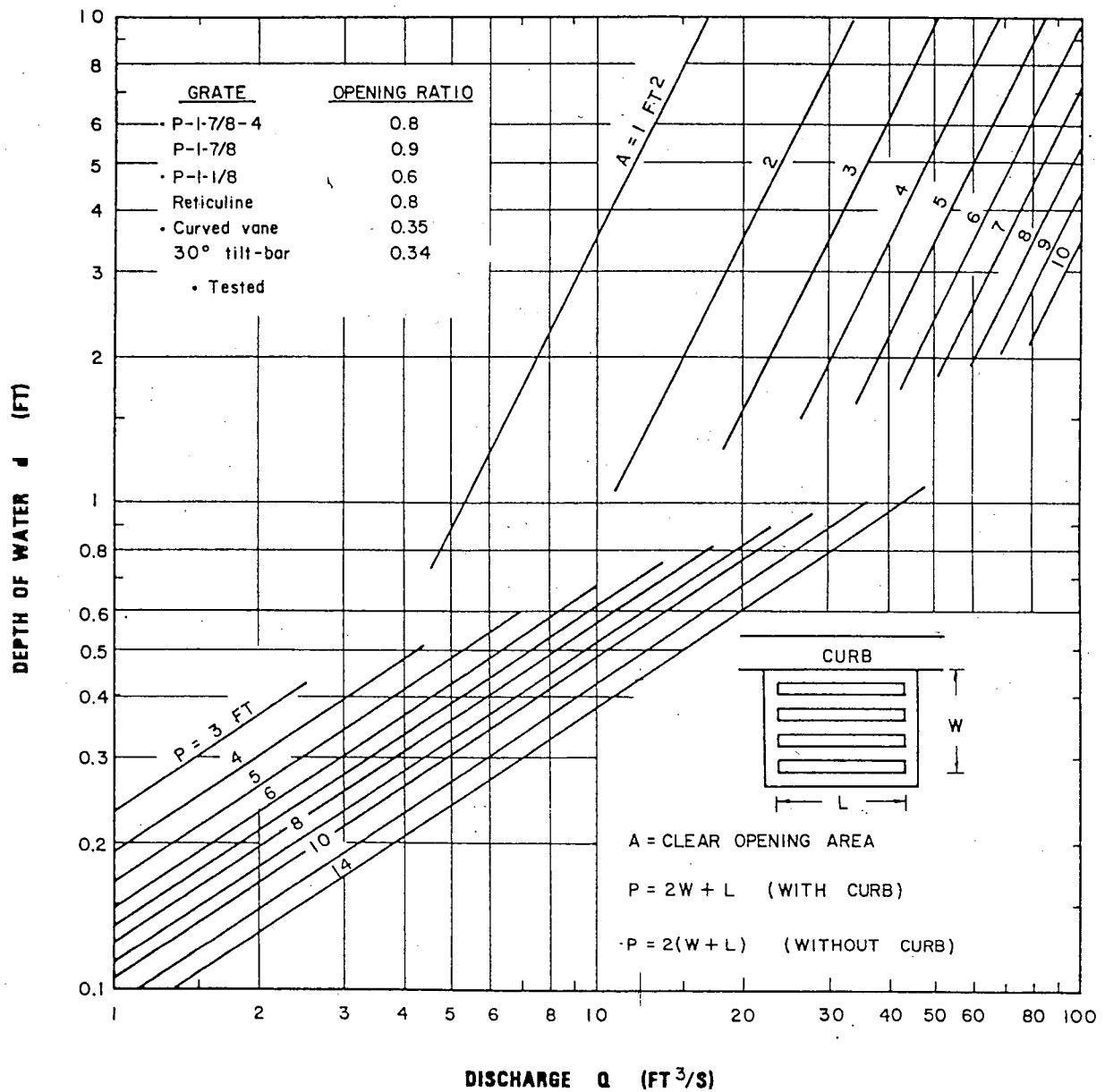


CHART 11. Grate inlet capacity in sump conditions.

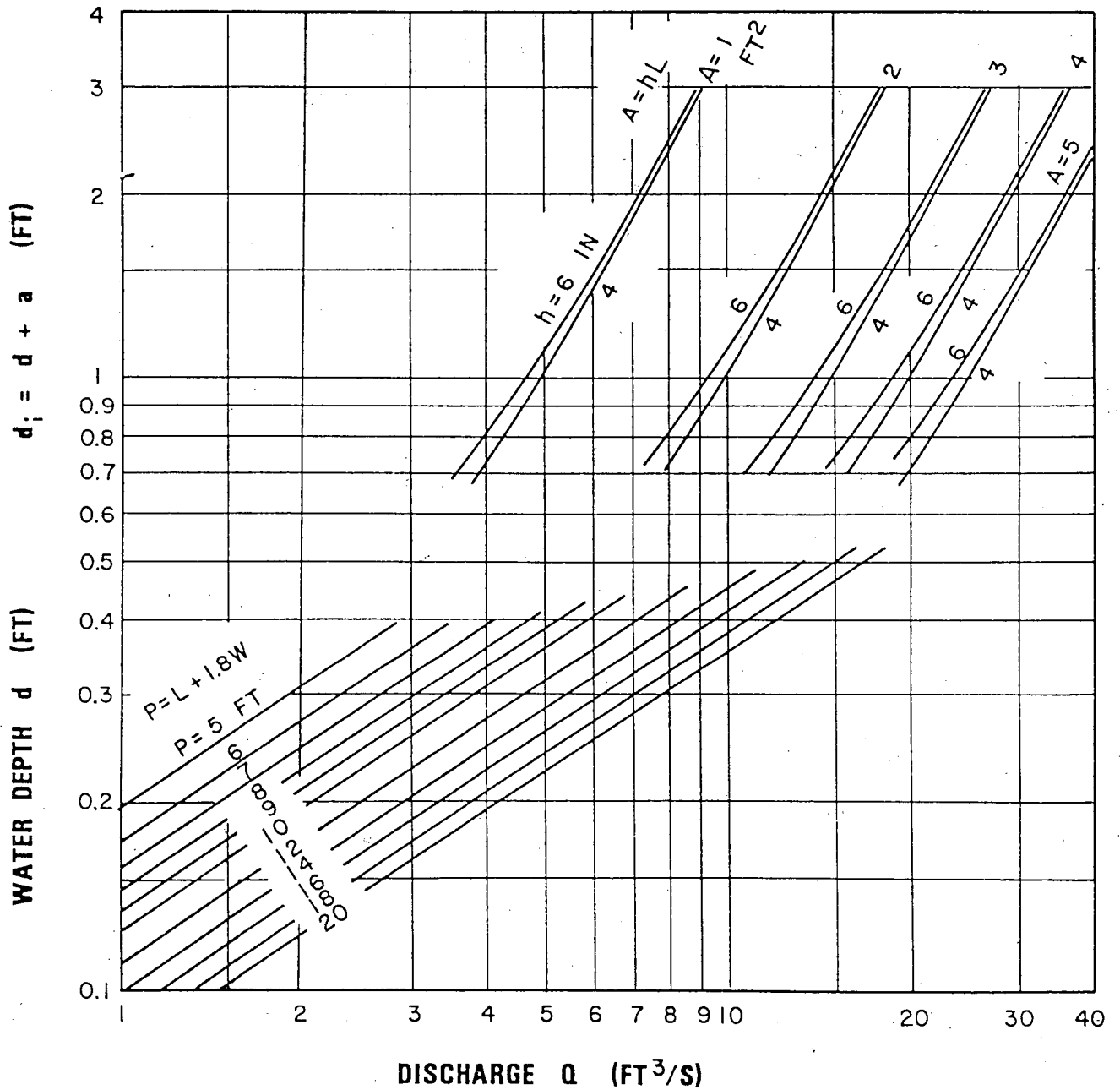
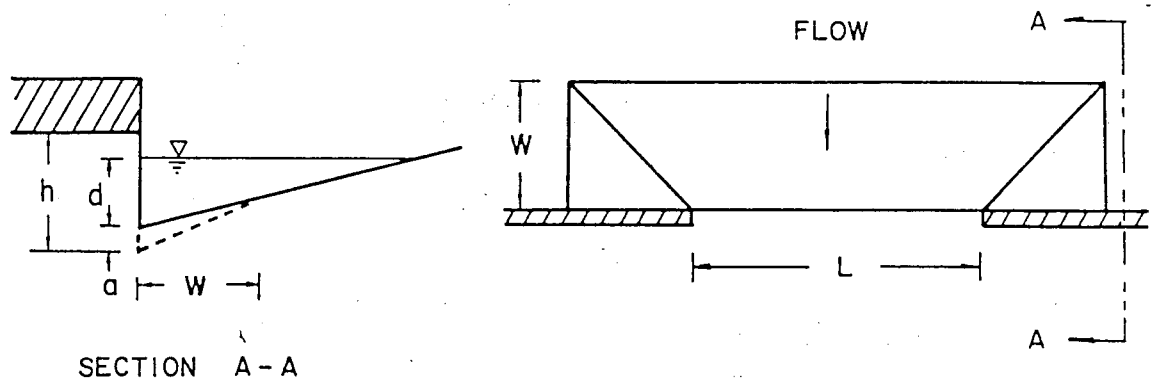


CHART 12. Depressed curb-opening inlet capacity in sump locations.

April 15, 1986

ATTACHMENT A
DRAINAGE CRITERIA MANUAL

RAINFALL INTENSITY TABLE FOR SEDGWICK COUNTY, KANSAS

The following tabulation contains rainfall intensity in inches per hour as derived from ESSA Weather Bureau Technical Paper 40 Modified to NWS Hydro-35, 1977 During First Hour

(1) DURATION IN MINUTES	RETURN PERIODS OF						
	1-YR	2-YR	5-YR	10-YR	25-YR	50-YR	100-YR
5	$i = 4.18$	5.57	6.53	7.41	8.52	9.48	10.32
6	3.99	5.32	6.25	7.09	8.16	9.09	9.89
7	3.81	5.09	5.99	6.81	7.84	8.74	9.50
8	3.66	4.89	5.75	6.55	7.55	8.42	9.15
9	3.52	4.70	5.54	6.31	7.28	8.13	8.83
10	3.39	4.52	5.34	6.09	7.04	7.86	8.54
11	3.27	4.36	5.16	5.89	6.81	7.61	8.27
12	3.18	4.21	4.99	5.71	6.60	7.38	8.02
13	3.05	4.08	4.84	5.53	6.41	7.17	7.79
14	2.96	3.95	4.69	5.37	6.23	6.97	7.57
15	2.87	3.83	4.56	5.22	6.06	6.78	7.37
16	2.78	3.72	4.43	5.08	5.90	6.60	7.18
17	2.71	3.61	4.31	4.95	5.75	6.44	7.00
18	2.63	3.51	4.20	4.83	5.61	6.29	6.84
19	2.56	3.42	4.10	4.71	5.47	6.14	6.68
20	2.50	3.33	4.00	4.60	5.35	6.00	6.53
21	2.44	3.25	3.90	4.50	5.23	5.87	6.39
22	2.38	3.17	3.81	4.40	5.12	5.75	6.26
23	2.32	3.10	3.73	4.31	5.01	5.63	6.13
24	2.27	3.03	3.65	4.22	4.91	5.52	6.01
25	2.22	2.96	3.57	4.13	4.81	5.41	5.90
26	2.20	2.90	3.50	4.05	4.72	5.31	5.79
27	2.16	2.84	3.43	3.98	4.63	5.21	5.69
28	2.14	2.78	3.37	3.90	4.55	5.12	5.59
29	2.11	2.72	3.30	3.83	4.47	5.03	5.49
30	2.08	2.67	3.24	3.76	4.39	4.94	5.40
31	2.05	2.62	3.19	3.70	4.32	4.86	5.32
32	2.02	2.57	3.10	3.63	4.25	4.79	5.22
33	1.99	2.52	3.05	3.57	4.18	4.71	5.14
34	1.96	2.48	3.01	3.51	4.11	4.63	5.07
35	1.93	2.44	2.98	3.46	4.05	4.56	5.00
36	1.91	2.39	2.93	3.41	3.99	4.50	4.93
37	1.89	2.35	2.88	3.36	3.93	4.43	4.86
38	1.87	2.32	2.84	3.31	3.87	4.37	4.79
39	1.85	2.28	2.80	3.26	3.82	4.31	4.73
40	1.83	2.24	2.76	3.22	3.76	4.25	4.66
41	1.81	2.21	2.72	3.17	3.71	4.19	4.60
42	1.79	2.18	2.68	3.13	3.66	4.13	4.54
43	1.77	2.14	2.64	3.09	3.61	4.08	4.49
44	1.75	2.11	2.61	3.05	3.57	4.03	4.43
45	1.73	2.08	2.57	3.01	3.52	3.98	4.38

ATTACHMENT A CONTINUED
Page 2

DURATION IN MINUTES	RETURN PERIODS OF						
	1-YR	2-YR	.5-YR	10-YR	25-YR	50-YR	100-YR
46	1.70	2.05	2.54	2.97	3.48	3.93	4.33
47	1.67	2.02	2.50	2.93	3.44	3.88	4.28
48	1.66	2.00	2.47	2.90	3.39	3.84	4.23
49	1.64	1.97	2.44	2.86	3.35	3.79	4.18
50	1.61	1.95	2.41	2.83	3.32	3.75	4.13
51	1.59	1.92	2.38	2.79	3.28	3.71	4.09
52	1.56	1.89	2.35	2.76	3.24	3.67	4.05
53	1.54	1.86	2.33	2.73	3.20	3.63	4.00
54	1.52	1.84	2.30	2.70	3.17	3.59	3.96
55	1.50	1.81	2.27	2.67	3.14	3.55	3.92
56	1.47	1.79	2.25	2.64	3.10	3.51	3.88
57	1.45	1.76	2.22	2.61	3.07	3.48	3.84
58	1.43	1.74	2.20	2.59	3.04	3.44	3.81
59	1.42	1.72	2.18	2.56	3.01	3.41	3.77
60	1.40	1.69	2.15	2.53	2.98	3.37	3.73
61	1.38	1.67	2.13	2.51	2.95	3.34	3.70
62	1.36	1.65	2.11	2.48	2.92	3.31	3.67
63	1.34	1.63	2.09	2.46	2.89	3.28	3.63
64	1.33	1.61	2.07	2.44	2.86	3.25	3.60
65	1.31	1.59	2.05	2.41	2.84	3.22	3.57
66	1.30	1.57	2.03	2.39	2.81	3.19	3.54
67	1.28	1.56	2.01	2.37	2.79	3.16	3.51
68	1.26	1.54	1.99	2.35	2.76	3.13	3.48
69	1.25	1.52	1.97	2.33	2.74	3.10	3.45
70	1.24	1.50	1.95	2.31	2.71	3.08	3.42
71	1.22	1.49	1.93	2.28	2.69	3.05	3.39
72	1.21	1.47	1.92	2.26	2.67	3.02	3.36
73	1.20	1.46	1.90	2.25	2.64	3.00	3.34
74	1.18	1.44	1.88	2.23	2.63	2.98	3.31
75	1.17	1.43	1.86	2.21	2.61	2.95	3.29
76	1.16	1.41	1.85	2.19	2.58	2.93	3.26
77	1.15	1.40	1.83	2.17	2.55	2.90	3.24
78	1.13	1.38	1.82	2.15	2.53	2.88	3.22
79	1.12	1.37	1.80	2.14	2.50	2.86	3.19
80	1.11	1.36	1.79	2.12	2.48	2.84	3.16
81	1.10	1.34	1.77	2.10	2.46	2.82	3.13
82	1.09	1.33	1.76	2.08	2.43	2.79	3.10
83	1.08	1.32	1.74	2.06	2.41	2.76	3.07
84	1.07	1.31	1.73	2.04	2.39	2.74	3.04
85	1.06	1.30	1.72	2.02	2.37	2.71	3.01
86	1.05	1.28	1.70	2.00	2.34	2.69	2.99
87	1.04	1.27	1.69	1.99	2.32	2.66	2.96
88	1.03	1.26	1.68	1.97	2.30	2.64	2.93
89	1.02	1.25	1.68	1.95	2.28	2.62	2.91
90	1.01	1.24	1.66	1.93	2.26	2.59	2.88

ATTACHMENT A CONTINUED
Page 3

<u>DURATION IN MINUTES</u>	<u>RETURN PERIODS OF</u>						
	<u>1-YR</u>	<u>2-YR</u>	<u>5-YR</u>	<u>10-YR</u>	<u>25-YR</u>	<u>50-YR</u>	<u>100-YR</u>
91	1.00	1.23	1.65	1.92	2.24	2.57	2.86
92	1.00	1.22	1.63	1.90	2.22	2.55	2.83
93	0.99	1.21	1.62	1.89	2.20	2.53	2.81
94	0.98	1.20	1.61	1.87	2.19	2.51	2.79
95	0.97	1.19	1.59	1.85	2.17	2.49	2.76
96	0.96	1.18	1.58	1.84	2.15	2.46	2.74
97	0.96	1.17	1.57	1.82	2.13	2.44	2.72
98	0.95	1.16	1.56	1.81	2.12	2.42	2.70
99	0.94	1.15	1.54	1.80	2.10	2.41	2.67
100	0.93	1.14	1.53	1.78	2.08	2.39	2.65
101	0.93	1.13	1.52	1.77	2.07	2.39	2.65
102	0.92	1.13	1.51	1.75	2.05	2.35	2.61
103	0.91	1.12	1.50	1.74	2.04	2.33	2.59
104	0.90	1.11	1.49	1.73	2.02	2.31	2.57
105	0.90	1.10	1.47	1.72	2.01	2.30	2.55
106	0.89	1.09	1.46	1.70	1.99	2.28	2.54
107	0.88	1.09	1.45	1.69	1.98	2.26	2.52
108	0.88	1.08	1.44	1.68	1.96	2.25	2.50
109	0.87	1.07	1.43	1.67	1.95	2.23	2.48
110	0.87	1.06	1.42	1.65	1.93	2.21	2.46
111	0.86	1.06	1.41	1.64	1.92	2.20	2.45
112	0.85	1.05	1.40	1.63	1.91	2.18	2.43
113	0.85	1.04	1.39	1.62	1.89	2.17	2.41
114	0.84	1.03	1.38	1.61	1.88	2.15	2.40
115	0.84	1.03	1.37	1.60	1.87	2.14	2.38
116	0.83	1.02	1.36	1.59	1.86	2.12	2.36
117	0.82	1.01	1.36	1.58	1.84	2.11	2.35
118	0.82	1.01	1.35	1.57	1.83	2.09	2.33
119	0.81	1.00	1.34	1.56	1.82	2.08	2.32
120	0.81	0.99	1.33	1.55	1.81	2.07	2.30

<u>DURATION IN HOURS</u>	<u>RETURN PERIODS OF</u>						
	<u>1-YR</u>	<u>2-YR</u>	<u>5-YR</u>	<u>10-YR</u>	<u>25-YR</u>	<u>50-YR</u>	<u>100-YR</u>
2	0.81	0.99	1.33	1.55	1.81	2.07	2.30
3	0.59	0.72	0.97	1.13	1.32	1.51	1.68
4	0.47	0.58	0.78	0.91	1.06	1.21	1.35
5	0.40	0.49	0.66	0.77	0.89	1.02	1.14
6	0.35	0.42	0.57	0.67	0.78	0.89	0.99
8	0.28	0.34	0.46	0.53	0.62	0.71	0.79
10	0.23	0.29	0.39	0.45	0.52	0.60	0.67
12	0.20	0.25	0.33	0.39	0.45	0.52	0.58
18	0.15	0.18	0.24	0.28	0.33	0.38	0.42
24	0.12	0.15	0.20	0.23	0.27	0.31	0.34

ATTACHMENT B
DRAINAGE CRITERIA MANUAL

INCREMENTAL INFILTRATION VALUES IN INCHES

Time Minutes**	SCS Hydrologic Soil Group			
	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>
5	.33	.26	.19	.12
10	.25	.17	.09	.04
15	.18	.11	.05	.02
20	.13	.07	.03	.02
25	.10	.05	.03	.02
30	.08	.05	.03	.02
35	.08	.05	.03	.02
40	.08	.05	.03	.02
45	.08	.05	.03	.02
50	.08	.05	.03	.02
55	.08	.05	.03	.02
60	.08	.05	.03	.02
65	.08	.05	.03	.02
70	.08	.05	.03	.02
75	.08	.05	.03	.02
80	.08	.05	.03	.02
85	.08	.05	.03	.02
90	.08	.05	.03	.02
95	.08	.05	.03	.02
100	.08	.05	.03	.02
105	.08	.05	.03	.02
110	.08	.05	.03	.02
115	.08	.05	.03	.02
120	.08	.05	.03	.02

**Time at end of the time increment

NOTE: Values for 125 minutes and additional 5 minute increments shall be the same as those shown for 120 minutes.

ATTACHMENT C

DRAINAGE CRITERIA MANUAL

DEPRESSION STORAGE LOSSES

<u>Surface Type</u>	<u>Total Loss (Inches)</u>
Impervious:	
Paved Areas	0.1
Flat Roofs	0.1
Sloped Roofs	0.05
Pervious:	
Lawns and Grass	0.3
Wooded Areas and Open Fields	0.4

ATTACHMENT D

DRAINAGE CRITERIA

RECOMMENDED RUNOFF COEFFICIENTS FOR RATIONAL METHOD
AND PERCENT IMPERVIOUS FOR UNIT HYDROGRAPH METHOD

Land Use or Surface Characteristics	Percent Impervious	Frequency			
		2	5	10	100
1. Business:					
Downtown Areas	95	0.84	0.85	0.87	0.91
Neighborhood Areas	70	0.68	0.69	0.73	0.80
2. Residential:					
Single Family (Soil Group D)					
1/8 Acre	50	0.57	0.61	0.66	0.79
1/4 Acre	38	0.50	0.54	0.62	0.76
1/3 Acre	30	0.46	0.50	0.59	0.73
1/2 Acre	25	0.42	0.48	0.56	0.72
3/4 Acre	22	0.42	0.46	0.55	0.71
1 Acre	20	0.41	0.45	0.54	0.71
Multi-Family (Soil Group D)					
Multi-Unit (detached)	60	0.62	0.66	0.72	0.82
Multi-Unit (attached)	65	0.64	0.68	0.73	0.83
Apartments	75	0.70	0.73	0.79	0.86
Single Family (Soil Group C)					
1/8 Acre	50	0.55	0.58	0.64	0.73
1/4 Acre	38	0.48	0.51	0.57	0.68
1/3 Acre	30	0.43	0.46	0.53	0.65
1/2 Acre	25	0.40	0.43	0.50	0.63
3/4 Acre	22	0.39	0.42	0.49	0.62
1 Acre	20	0.37	0.40	0.48	0.61
Multi-Family (Soil Group C)					
Multi-Unit (detached)	60	0.60	0.63	0.69	0.77
Multi-Unit (attached)	65	0.63	0.66	0.71	0.79
Apartments	75	0.68	0.72	0.77	0.83
Single-Family (Soil Group B)					
1/8 Acre	50	0.52	0.54	0.59	0.67
1/4 Acre	38	0.44	0.46	0.52	0.61
1/3 Acre	30	0.39	0.41	0.47	0.57
1/2 Acre	25	0.36	0.38	0.44	0.54
3/4 Acre	22	0.34	0.36	0.42	0.52
1 Acre	20	0.33	0.35	0.40	0.51
Multi-Family (Soil Group B)					
Multi-Unit (detached)	60	0.58	0.60	0.65	0.72
Multi-Unit (attached)	65	0.61	0.64	0.68	0.75
Apartments	75	0.67	0.70	0.74	0.80

Land Use or Surface Characteristics	Percent Impervious	Frequency			
		<u>2</u>	<u>5</u>	<u>10</u>	<u>100</u>
<u>Single Family (Soil Group A)</u>					
1/8 Acre	50	0.47	0.50	0.54	0.60
1/4 Acre	38	0.39	0.41	0.45	0.52
1/3 Acre	30	0.33	0.35	0.39	0.47
1/2 Acre	25	0.30	0.31	0.35	0.44
3/4 Acre	22	0.28	0.29	0.33	0.42
1 Acre	20	0.26	0.28	0.32	0.40
<u>Multi-Family (Soil Group A)</u>					
Multi-Unit (detached)	60	0.55	0.57	0.61	0.67
Multi-Unit (attached)	65	0.58	0.60	0.64	0.70
Apartments	75	0.65	0.68	0.72	0.77
3. Industrial:					
Light Areas	70	0.68	0.69	0.73	0.80
Heavy Areas	80	0.74	0.76	0.79	0.84
4. Playgrounds:	15	0.33	0.35	0.42	0.55
5. Schools:	40	0.49	0.51	0.56	0.66
6. Railroad Yard Areas:	30	0.43	0.45	0.50	0.62
Undeveloped Urban Areas:					
Offsite Flow Analysis (when land use not defined)	45	0.52	0.54	0.59	0.68
8. Streets:					
Paved	99	0.87	0.88	0.90	0.93
Gravel	00	0.24	0.26	0.33	0.48
9. Drive, Parking Lots and Walks:	96	0.87	0.87	0.88	0.89
10. Roofs:	90	0.80	0.85	0.90	0.93
11. Urban Lawn Areas (See Note No. 1 below):					
<u>Soil Group A</u>					
Slope less than 1%	00	0.08	0.09	0.13	0.23
Slope 1% to 4%	00	0.12	0.13	0.17	0.27
Slope more than 4%	00	0.16	0.17	0.21	0.31
<u>Soil Group B</u>					
Slope less than 1%	00	0.16	0.18	0.24	0.37
Slope 1% to 4%	00	0.20	0.22	0.28	0.41
Slope more than 4%	00	0.24	0.26	0.32	0.45
<u>Soil Group C</u>					
Slope less than 1%	00	0.24	0.27	0.35	0.51
Slope 1% to 4%	00	0.26	0.29	0.37	0.53
Slope more than 4%	00	0.28	0.31	0.39	0.55

Land Use or Surface Characteristics	Percent Impervious	Frequency			
		<u>2</u>	<u>5</u>	<u>10</u>	<u>100</u>
<u>Soil Group D</u>					
Slope less than 1%	00	0.28	0.33	0.43	0.63
Slope 1% to 4%	00	0.30	0.35	0.45	0.65
Slope more than 4%	00	0.32	0.37	0.47	0.67

Note No. 1: Coefficients shown in the above table are for pervious open space areas with thick turf which includes pervious areas in parks and cemeteries. Coefficients shown above must be increased 0.02 for use with agricultural pasture areas. Coefficients shown above must be reduced by 0.04 for use with agricultural cultivated areas. Group A soils are well-drained, coarse textured sands with high infiltration rates. Group B soils are moderately well-drained, moderately coarse textured soils with moderate infiltration rates. Group C soils are moderately poor-drained, moderately fine textured soils with slow infiltration rates. Group D soils are poor-drained, fine textured soils with very slow infiltration rates.

GENERAL NOTE: These Rational Formula Coefficients may not be valid for basins 320 acres or larger.

ATTACHMENT E

DRAINAGE CRITERIA

AVERAGE OVERLAND FLOW VELOCITY FOR USE WITH URBANIZED AREAS

Surface Type	VELOCITY IN FEET/SECOND FOR SLOPES IN PERCENT SHOWN																				
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	20.0	
Forest with Heavy Ground Litter or Meadow		0.03	0.04	0.06	0.07	0.08	0.09	0.10	0.11	0.12	0.13	0.16	0.21	0.28	0.33	0.39	0.46	0.53	0.60	0.72	1.10
Fallow or Minimum Tillage Cultivation		0.06	0.08	0.10	0.12	0.13	0.14	0.16	0.17	0.18	0.19	0.29	0.40	0.51	0.66	0.78	0.91	1.05	1.20	1.44	2.10
Short Grass Pasture or Lawns		0.09	0.13	0.15	0.18	0.20	0.21	0.23	0.25	0.26	0.28	0.45	0.60	0.77	0.96	1.17	1.33	1.50	1.68	1.98	3.20
Almost Bare Ground		0.16	0.22	0.28	0.31	0.35	0.38	0.41	0.44	0.46	0.49	0.70	0.85	1.05	1.26	1.50	1.75	2.03	2.32	2.79	4.40
Grassed Waterway		0.35	0.48	0.58	0.67	0.77	0.84	0.91	0.98	1.05	1.12	1.54	1.82	2.10	2.38	2.78	3.20	3.66	4.14	4.56	7.00
Paved Areas (Sheet Flow) or Shallow Gutter Flow		0.44	0.62	0.77	0.91	1.05	1.12	1.19	1.26	1.33	1.40	2.00	2.55	3.20	3.83	4.41	5.04	5.70	6.00	6.20	9.00

ATTACHMENT F

DETERMINATION OF DIMENSIONLESS WATERSHED CONVEYANCE FACTOR ($\emptyset$)

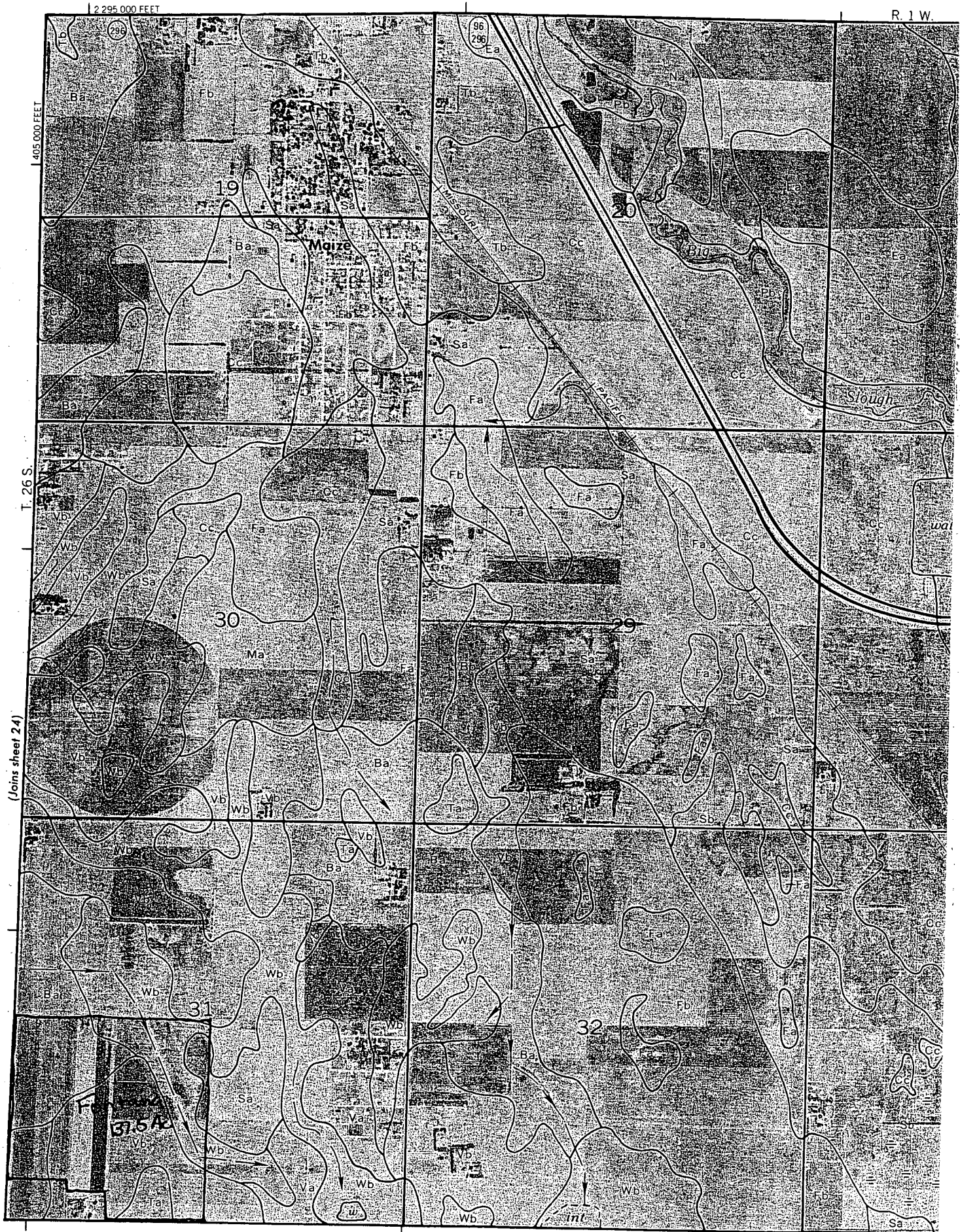
$$\emptyset = \emptyset_1 + \emptyset_2$$

$\emptyset_1$	Classification
0.6	Extensive channel improvement and storm sewer system, closed conduit channel system
0.7	Moderate channel improvement and storm sewer system.
0.8	Some channel improvement and storm sewers, mainly cleaning and enlargement of existing channel.
0.9	Little channel improvement and storm sewers.
1.0	Natural channel conditions.
$\emptyset_2$	Classification
0.0	No channel vegetation.
0.1	Light channel vegetation.
0.2	Moderate channel vegetation.
0.3	Heavy channel vegetation.

EXHIBIT NO. 1

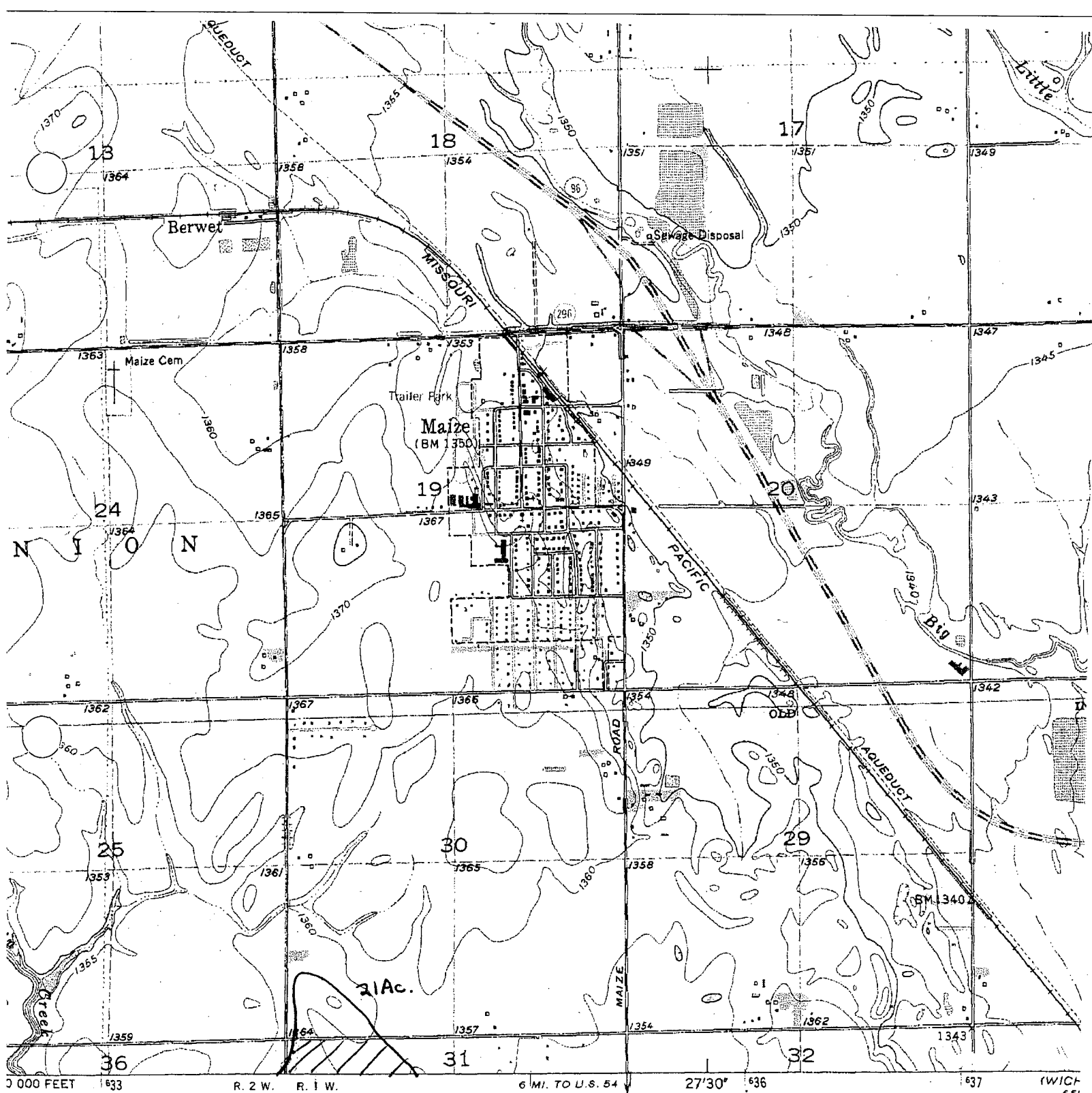
SOIL LEGEND

<u>SYMBOL</u>	<u>HYDROLOGIC GROUP</u>	<u>NAME</u>
Aa	B	Albion-Shellabarger sandy loams, 1 to 4 percent slopes
Ab	B	Albion and Shellabarger sandy loams, 7 to 15 percent slopes
Ba	C	Blanket silt loam, 0 to 1 percent slopes
Bb	C	Blanket silt loam, 1 to 3 percent slopes
Ca	B	Canadian fine sandy loam
Cb	B	Canadian-Waldeck fine sandy loams
Cc	D	Carwile fine sandy loam
Cd	B	Clark-Ost clay loams, 1 to 4 percent slopes
Ce	C	Clime silty clay, 3 to 6 percent slopes
Ea	B	Elandco silt loam
Eb	B	Elandco silt loam, occasionally flooded
Ec	B	Elandco silt loam, frequently flooded
Fa	B	Farnum loam, 0 to 1 percent slopes
Fb	B	Farnum loam, 1 to 3 percent slopes
Fc	B	Farnum loam, sandy substratum, 0 to 1 percent slopes
Ga	D	Goessel silty clay, 0 to 1 percent slopes
Gb	D	Goessel silty clay, 1 to 2 percent slopes
Ia	D	Irwin silty clay loam, 1 to 3 percent slopes
Ib	D	Irwin silty clay loam, 3 to 6 percent slopes
Ic	D	Irwin silty clay loam, 2 to 6 percent slopes, eroded
La	C	Lesho loam
Lb	A	Lincoln soils
Ma	B	Milan loam, 1 to 3 percent slopes
Mb	B	Milan form, 3 to 6 percent slopes
Mc	B	Milan clay loam, 2 to 6 percent slopes, eroded
Na	B	Naron fine sandy loam
Oc	D	Owens clay loam, 1 to 3 percent slopes
Od	D	Owens-Rock outcrop complex, 3 to 10 percent slopes
Pa		Pits
Pb	D	Plevna fine sandy loam
Pc	A	Pratt loamy fine sand, undulating
Pd	A	Pratt-Tivoli complex, rolling
Ra	D	Renfrow silty clay loam, 1 to 3 percent slopes
Rb	D	Renfrow silty clay loam, 3 to 6 percent slopes
Rc	D	Renfrow-Owens clay loams, 1 to 4 percent slopes
Rd	D	Rosehill silty clay, 1 to 3 percent slopes
Sa	B	Shellabarger sandy loam, 1 to 3 percent slopes
Sb	B	Shellabarger sandy loam, 3 to 6 percent slopes
Sc	B	Shellabarger sandy loam, 3 to 6 percent slopes, eroded
Ta	D	Tabler silty clay loam
Tb	D	Tabler-Drummond complex
Ua	B	Urban land-Canadian complex
Ub	B	Urban land-Elandco complex
Uc	B	Urban land-Farnum complex, 0 to 3 percent slopes
Ud	D	Urban land-Irwin complex, 1 to 3 percent slopes
Ue	D	Urban land-Tabler complex
Va	B	Vanoss silt loam, 0 to 1 percent slopes
Vb	B	Vanoss silt loam, 1 to 3 percent slopes
Vc	B	Vanoss silt loam, 3 to 6 percent slopes
Vd	B	Vanoss silt loam, 3 to 6 percent slopes, eroded
Ve	D	Vernon sandy loam, 1 to 3 percent slopes
Vf	D	Vernon sandy loam, 3 to 6 percent slopes
Wa	C	Waldeck sandy loam





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Topography in part compiled from aerial photographs
1955. Topography by planetable surveys 1939

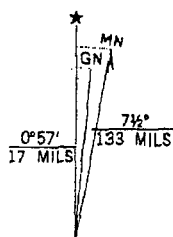
Projection. 1927 North American datum
Grid based on Kansas coordinate system, south zone
In Transverse Mercator grid ticks,
with true

Indicates area in which only landmark buildings are shown

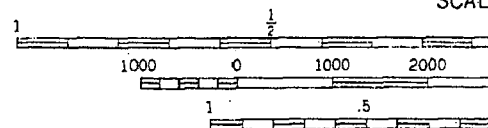
Dashed lines indicate selected fence and field lines where
shown on aerial photographs. This information is unchecked

Indicates predicted North American Datum 1983

Indicates section lines 28 meters east as shown by



UTM GRID AND 1982 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



CONTOUR 1
NATIONAL GEODETIC

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