Hydrology Report
Stratton Drainage Basin
Outfall Study
El Paso County, Colorado

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Prepared For:

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CE-7052

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INTRODUCTION

Methodology

The hydrologic analysis for the Stratton Drainage Basin Outfall Study was conducted by utilizing the SCS TR-20 computer program (Reference 3) to generate hydrographs for the 10-year and 100-year floods for existing and proposed conditions. The analysis was conducted for the 2 hour storm with Antecedent Moisture Condition 3 and the 24 hour storm with Antecedent Moisture Condition 2. The analysis conforms to current El Paso County criteria (Reference 1) and was performed based on minor modifications and revisions to TR-20 data prepared in a previous study by Muller Engineering Co. in May 1990 (Reference 4). This basin was also studied by Drexel Barrell for the Master Drainage Report for Cheyenne Mountain Center in October 1985 (Reference 6), however, that analysis was based on a 6 hour storm rather than the 2 hour/24 hour storms that are utilized in the current criteria.

Summary of Revisions

Revisions incorporated into the current study include the use of FIMS data from the City of Colorado Springs for topographic information. This resulted in minor variations in subbasin boundaries and areas within the study area but did not change the overall drainage area or boundary. Some of the larger basins in the Muller study were further subdivided and four additional basins were added to cover the area between I-25 and Fountain Creek which were not included in the Muller study TR-20. Detention Pond K2 was included in the Muller TR-20 data as an existing reservoir and was deleted from this TR-20 analysis for existing and future conditions. Detention Pond K2 will be evaluated at a later date along with other alternatives. The final TR-20 model includes a total of 24 basins and a total area of 2.67 square miles.

SUMMARY OF HYDROLOGIC PARAMETERS
STRATTON DRAINAGE BASIN OUTFALL STUDY
EL PASO COUNTY, COLORADO

BASIN	DRAINAGE AREA (SQ. MI.)	TIME OF CONC. (HR.)	HISTORIC CN	DEVELOPED CN
044	0.104	0.44	74.5	74.5
045	0.083	0.33	74.5	74.5
01	0.135	0.22	74.5	74.5
02	0.063	0.30	79.6	79.6
001	0.116	0.40	72.0	76.2
002	0.093	0.20	79.0	79.0
003	0.100	0.10	79.0	79.0
004	0.068	0.20	71.0	81.0
005	0.061	0.20	77.0	92.0
046	0.102	0.29	76.0	80.1
05	0.169	0.40	76.0	80.1
061	0.034	0.15	85.0	85.0
006	0.159	0.40	81.0	88.0
008	0.116	0.40	81.0	85.0
009	0.147	0.40	81.0	81.0
21	0.139	0.26	84.0	88.0
20	0.103	0.27	84.0	88.0
021	0.076	0.40	87.0	94.0
024	0.081	0.30	79.0	94.0
022	0.125	0.10	79.0	94.0
040	0.224	0.48	88.8	89.5
041	0.198	0.57	76.7	87.1
042	0.135	0.50	78.2	93.8
043	0.039	0.23	84.0	88.0

STRATTON DRAINAGE BASIN OUTFALL STUDY
SUMMARY OF DISCHARGES FOR BASINS/DESIGN POINTS

BASIN/DESIGN POINT	DRAINAGE AREA (AC.)	PROPOSED CONDITIONS				EXISTING CONDITIONS			
		2-HR. STORM		24-HR. STORM		2-HR. STORM		24-HR. STORM	
		10-YR.	100-YR.	10-YR	100-YR.	10-YR.	100-YR.	10-YR.	100-YR
DRAINAGE BASINS									
001	0.116	80	190	90	180	70	170	70	150
002	0.093	110	230	120	210	110	230	120	210
003	0.100	140	280	140	240	140	280	140	240
004	0.068	90	180	90	160	50	130	50	110
005	0.061	120	200	130	190	70	140	70	130
006	0.159	200	360	230	380	150	300	170	300
008	0.116	130	250	150	250	110	220	120	210
009	0.147	140	280	150	270	140	280	150	270
01	0.135	120	270	130	250	120	270	130	250
02	0.063	60	130	70	130	60	130	70	130
021	0.076	110	190	140	210	90	170	110	170
022	0.125	330	500	300	430	180	360	170	300
024	0.081	140	230	170	250	80	170	90	160
040	0.224	260	470	320	520	250	460	310	500
041	0.198	190	360	230	380	120	270	130	250
042	0.135	170	300	230	350	100	210	110	200
043	0.039	60	110	70	110	60	100	60	100
044	0.104	70	150	70	140	70	150	70	140
045	0.083	60	140	70	130	60	140	70	130
046	0.102	110	220	120	210	90	200	90	180
05	0.169	150	320	170	300	120	280	130	260
061	0.034	60	110	60	90	60	110	60	90
20	0.103	160	280	180	280	140	260	150	250
21	0.139	220	390	240	380	190	360	200	340
DESIGN POINTS									
1	0.40	290	660	470	640	240	570	270	560
2	0.76	220	500	230	520	190	470	210	470
3	0.82	320	670	330	690	250	580	240	580
4	1.29	490	1010	550	1070	380	880	390	870
5	2.07	900	1970	1060	1920	720	1710	710	1560
6 (INFLOW)	0.32	190	430	190	390	190	430	190	390
6 (OUTFLOW)	0.32	80	360	30	260	80	360	30	260
7	0.16	110	230	120	220	110	230	120	220
8	0.44	90	330	100	200	90	320	80	190
9	0.69	250	530	270	510	250	520	260	490
10	0.27	250	520	280	500	200	460	220	430

REFERENCES

1. City of Colorado Springs & El Paso County Drainage Criteria Manual, City of Colorado Springs Dept. of Public Works, HDR Infrastructure, Inc. and El Paso County Dept. of Public Works, November 1991.

2. Zone Maps of the City of Colorado Springs, City of Colorado Springs Planning Division, July 1989.

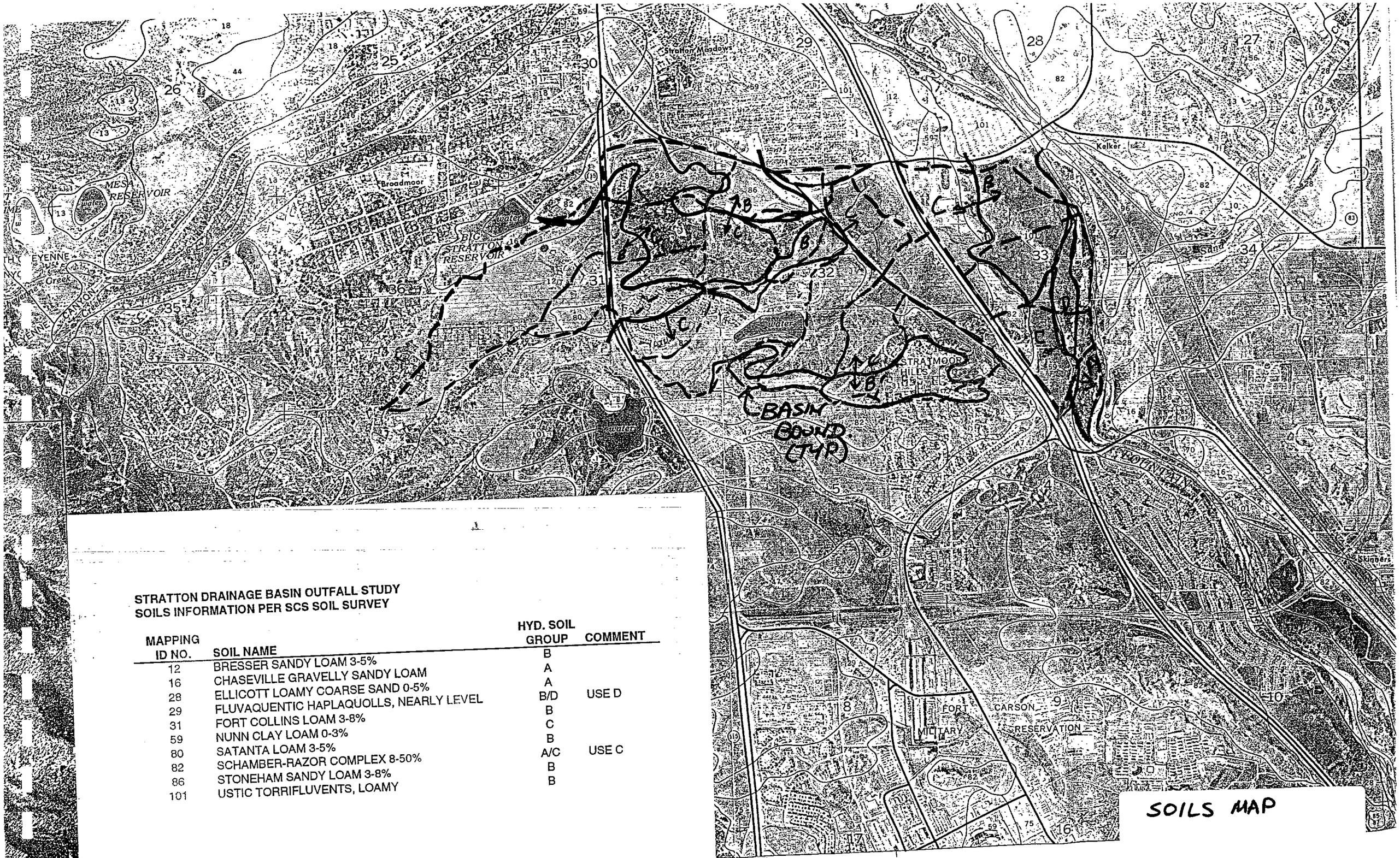
3. Project Formulation - Hydrology (1982 Version), Technical Release No. 20 User's Manual, U.S.D.A. Soil Conservation Service, May 1982.

4. Stratton and Fischer's Canyon Drainage Basin Planning Study, Draft Hydrologic Analysis, Muller Engineering Co., May 31, 1990.

5. Soil Survey of El Paso County Area, Colorado, USDA - Soil Conservation Service, June 1981.

6. Master Drainage Report for Cheyenne Mountain Center and Final Drainage Report For Cheyenne Mountain Center Filing No. 1 and Cheyenne Meadows Road, Drexel Barrell, October 1985.

APPENDIX



STRATTON DRAINAGE BASIN OUTFALL STUDY
SOILS INFORMATION PER SCS SOIL SURVEY

MAPPING ID NO.	SOIL NAME	HYD. SOIL GROUP	COMMENT
12	BRESSER SANDY LOAM 3-5%	B	
16	CHASEVILLE GRAVELLY SANDY LOAM	A	
28	ELLICOTT LOAMY COARSE SAND 0-5%	A	
29	FLUVAQUENTIC HAPLAQUOLLS, NEARLY LEVEL	B/D	USE D
31	FORT COLLINS LOAM 3-8%	B	
59	NUNN CLAY LOAM 0-3%	C	
80	SATANTA LOAM 3-5%	B	
82	SCHAMBER-RAZOR COMPLEX 8-50%	A/C	USE C
86	STONEHAM SANDY LOAM 3-8%	B	
101	USTIC TORRIFLUVENTS, LOAMY	B	

SOILS MAP

4°52'30"

MISCELLANEOUS CALCULATIONS

Project STRATTON DRAINAGE BASIN OUTFALL STUDY		Job No CE7052
Client EL PASO CO.	By RM	Date REV. 6/9/94 5/9/94

BASIN 040

D.A. = 0.224 SQ. MI. (143.4 AC)

SOILS/LAND USE 44 AC. - RES, C SOILS. - CN - 83 (ASSUME 1/4 AC. LOTS)

16 AC. BUSINESS CENTER/IND. (C-SOILS) 94

83.4 AC. BUSINESS CENTER/IND. (B SOILS) 92

EX. COND. CN:

PUD/BUS DEVELOPED

RES. - ≈ 1/2 DEV.

- ≈ 1/2 RANGE - FAIR

$$CN_{(AMC\ II)} = \frac{22(83) + 22(79) + 16(94) + 83.4(92)}{143.4}$$

CN = 88.8

DEV. COND. CN:

$$CN = \frac{44(83) + 16(94) + 83.4(92)}{143.4} = 89.5$$

T_c: L = 100' O/L S = 1% C_{10} = .90 "C" SOILS

T_i = .4 MIN.

L = 1300' SHT. FLOW/PAVED

S = 1% V = 2.0

$T_t = \frac{1300}{60(2.0)} = 10.8$ MIN.

L = 3800 - CHAN. S = 0.3%

5' B.W. ± 2:1 SS n = .035 D = 5

⇒ Q = 342 V = 4.6

$T_t = 3800/60(4.6) = 13.8$ MIN

T_c = 4 + 10.8 + 13.8 = 28.6 MIN = 0.48 HR.

Project STRATTON DRAINAGE BASIN OUTFALL STUDY | Job N° CE-7052

Client EL PASO CO. | By RM | Date REV. 6/9/94 5/9/94

BASIN 041

D.A. = 0.198 SQ. MI. (126.7 AC.)

	CN EX	CN DEV.
LAND USE/SOILS: 14 AC. RES A/B (USE B)	69	75
5 AC. RES D	84	87
84.7 AC. IND. A/B (USE B) (1/3 DEV: 2/3 RANGE EX)	75.3	88
23 AC. IND C (EX ≈ 1/2 DEV. ≈ 1/2 RANGE)	85	91

$$CN\ (EX.) = \frac{14(69) + 5(84) + 84.7(75.3) + 23(85)}{126.7} = 76.7$$

$$CN\ (DEV.) = \frac{14(75) + 5(87) + 84.7(88) + 23(91)}{126.7} = 87.1$$

USE 89

T_c: T_i: L=300' S=2% T_i= 6 MIN.

T_T: L= 3000' SWALE S=1.7%

USE V= 2.5 (ASSUME FUTURE PAVED O/L)

$T_T = 3000/60(2.5) = 20.0$ MIN.

T_T: L=1200 S=1.7 V=2.5

$T_T = 1200/60(2.5) = 8.0$

$T_C = 6.0 + 20.0 + 8.0 = 34.0$ MIN. = 0.57 HR.

Project STRATTON DRAINAGE BASIN OUTFALL STUDY		Job No CE7052
Client EL PASO CO.	By RM	Date REV. 6/9/94 5/9/94

BASIN 042

D.A. = 0.135 SQ. MI. (86.4 AC.)

SOILS/LAND USE: "C" SOILS 8 AC. IND. - D
EX. UND. (RANGE FAIR) 11 AC. IND. - A (USE B)
67.4 AC. IND - C

$$\text{EX. CN.} = \frac{8(84)+11(69)+67.4(79)}{86.4} = 78.2$$

$$\text{DEV. CN} = \frac{8(95)+11(92)+67.4(94)}{86.4} = 93.8$$

T_c: L = 300' S = 3%

$T_i = 5$

T_t: L = 3000' @ 1%
ASSUME SHAL. GUTTER/SHT. FLOW
a) FUT. DEV.

V = 2 FPS

$T_t = 3000/60(2) = 25$

$T_c = 5+25 = 30$ MIN. = 0.5 HRS.

Project STRATTON DRAINAGE BASIN OUTFALL STUDY		Job No CE7052
Client EL PASO CO.	By RM	Date 5/9/94

BASIN 043

D.A. = .039 SQ. MI. (25.0 AC.)

SOILS/LAND USE – A SOILS - USE "B"

CN = 88.0 (DEV.)

CN = 84.0 (EX – RANGE - FAIR)

T_c: T_i: L = 300' @ 1%

T_i = 7

T_T: L = 800' ASSUME 1% SHT. FLOW

V = 2.0

$T_T = 800/60(2) = 6.7$ MIN.

$T_c = 7 + 6.7 = 13.7$ MIN. = 0.23 HR.

Project STRATTON DRAINAGE BASIN OUTFALL STUDY		Job No CE7052
Client EL PASO CO.	By RM	Date 5/9/94

BASIN 061 :

D.A. = 0.034 SQ. MI.

SOILS/LAND USE : EX. & PROPOSED
"B" SOILS

RES. - MULTI FAMILY
CN = 85

T_c : T_i : 100' @ 4% RES. C_{10} = .60

T_i = 6 MIN.

T_t : L = 2000' C&G @ 4%

d ≅ R = 0.5'

$V = \frac{1.486}{.016} \cdot .5^{2/3}(.04)^{1/2} = 11.7$

$T_t = 2000/60(11.7) = 2.9$

$T_c = 6 + 2.9 = 8.9$ MIN. = 0.15 HR.

BASIN 046 DA = 0.102 SQ. MI.

CN = 80 EX. & PROP. (DEV. FROM BASIN 05-MULLER)

T_c : T_i : L = 150' 2% C = .60

T_i = 10 MIN.

T_t : L = 2000' @ 5% (C&G)

V = 4.5

$T_t = 2000/60(4.5) = 7.4$

$T_c = 10 + 7.4 = 17.4$ MIN = 0.29 HR.

Project STRATTON DRAINAGE BASIN OUTFALL STUDY | Job No CE7052

Client EL PASO CO. | By RM | Date 5/11/94 REV. 5/17/94

BASIN 21

D.A. = 0.139 SQ. MI.

CN - DEV. - 88
EX - 79
} PER MULLER FOR BASIN 20

T_c: T_i: 200' @ 4% C_{10} = .65

T_i = .8 MIN.

T_t: Gutter Flow: L = 1200, V = 5.0

$T_t = 1200/60(5.0) = 4.0$

RD. DITCH: L = 1800, B = 2', Z = 2:1, n = .035, S = 3.7 ⇒ V = 8.7

$T_t = 1800/60(8.7) = 3.5$

$T_c = 8 + 4 + 3.5 = 15.5$ MIN. = 0.26 HR.

BASIN 20. REVISE T_c

T_i: 200' @ 4% C_{10} = .65

T_i = 8 MIN.

T_t: L = 2000' SHALLOW GUTTER @ 1%

V = 5.1

$T_t = 2000/60(5.1) = 6.5$ MIN.

T_t: L = 800' RD. DITCH SWALE @ 3%, B = 2', d = 2', n = .035, Z = 2:1 ⇒ V = 7.8

$T_t = 800/60(7.8) = 1.7$

$T_c = 8 + 6.5 + 1.7 = 16.2$ MIN. = 0.27 HR.

Project STRATTON DRAINAGE BASIN OUTFALL STUDY | Job No CE7052

Client EL PASO CO. | By RM | Date 5/11/94

BASIN 044

D.A. = 0.104 SQ. MI.

CN = 75 (EX. & PROP. PER MULLER)

T_c: T_i: L = 300' @ 2% C_{10} = .60
B SOILS.

T_i = 13 MIN.

T_t: L = 700 Rd. S = 5% V = 4.5

$T_t = \frac{700}{60(4.5)} = 2.6$ MIN.

T_t: L = 1000' SWALE @ 2.5% V = 2.5

$T_t = 1000/60(2.5) = 6.7$

T_t: L = 2100 S = 2% D = .5' $V = \frac{1.486}{.016} \cdot .5^{2/3}(.02)^{1/2}$
V = 8.3

$T_t = 2100/60(8.3) = 4.2$

T_c = 13 + 2.6 + 6.7 + 4.2 = 26.5 MIN. = 0.44 HR.

BASIN 045

DA. = .083 SQ. MI.

CN = 75

T_c: T_i: L = 150' @ 2% C_{10} = .60

T_i = 11 MIN.

T_t: L = 1500' @ 2% V = 2.8

$T_t = 1500/60(2.8) = 8.9$

T_c = 11 + 8.9 = 19.9 MIN. = 0.33 HR.

BASIN 01 D.A. = 0.135

T_i: L = 250' @ 4% C_{10} = .60 T_i = 10 MIN.

T_t: L = 1700 @ 2% d = .5 V = 8.3

$T_t = 1700/60(8.3) = 3.4$

T_c = 10 + 3.4 = 13.4 = 0.22

Project	Job N°
STRATTON DRAINAGE BASIN OUTFALL STUDY	CE7052

Client	By	Date
EL PASO CO.	RM	5/11/94

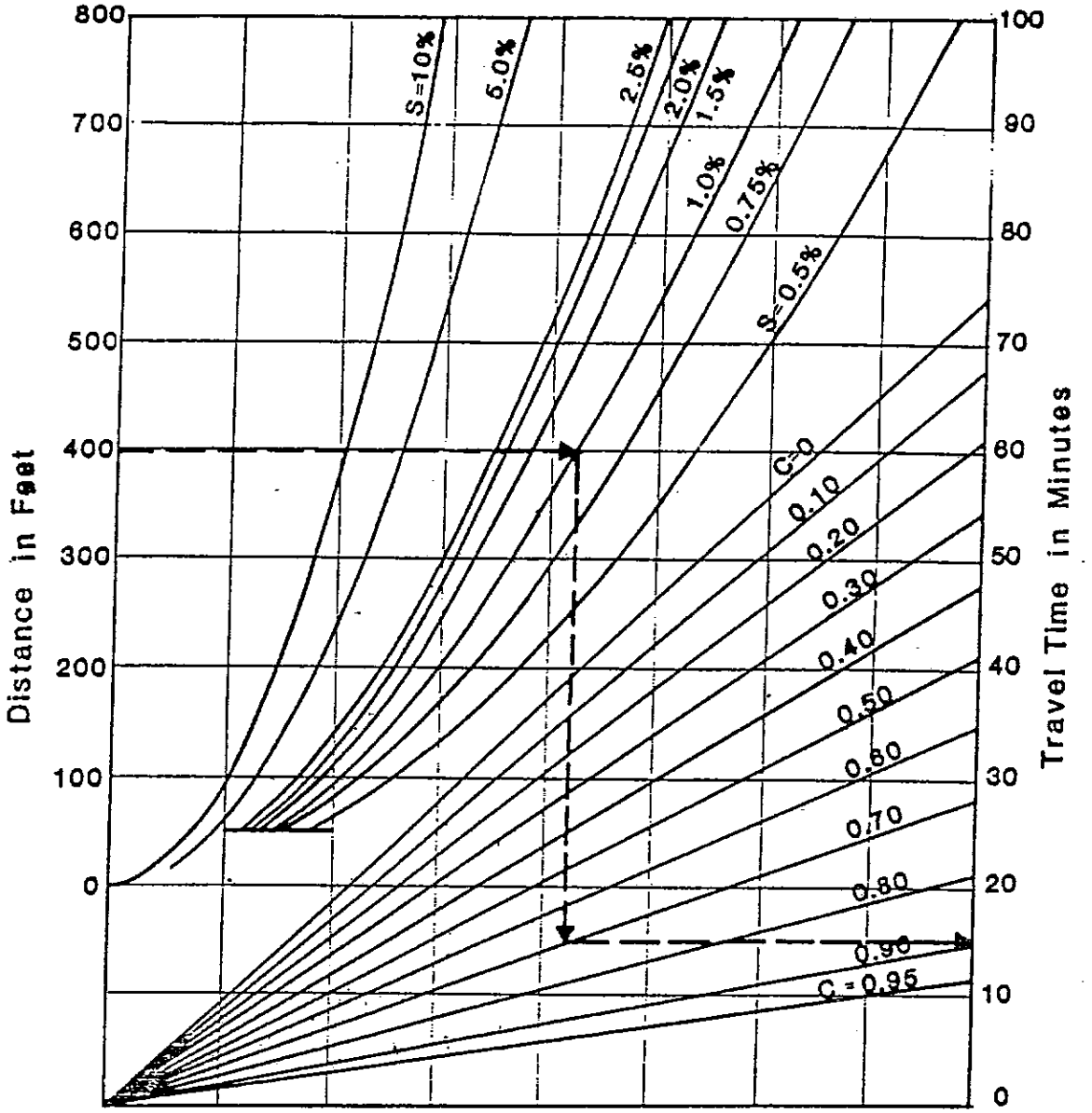
CHECK CN FOR CIVIC CENTER / CHEYENNE MTN. CENTER

'C' SOILS

BASIN O21 (TIA & TIB PER MULLER) & O22 (T2)

CN = 94 PER MULLER (DEVELOPED)

(STILL VALID FOR COMM./BUSINESS AREAS)



REFERENCE : Wright – McLaughlin Engineers, Urban Storm Drainage Criteria Manual, Vol. 1, Denver Regional Council of Governments, Denver, Co. 1977

HDR Infrastructure, Inc.
A Centerra Company

The City of Colorado Springs / El Paso County
Drainage Criteria Manual

Overland Flow Curves

Date: OCT. 1987

Figure: 5-2

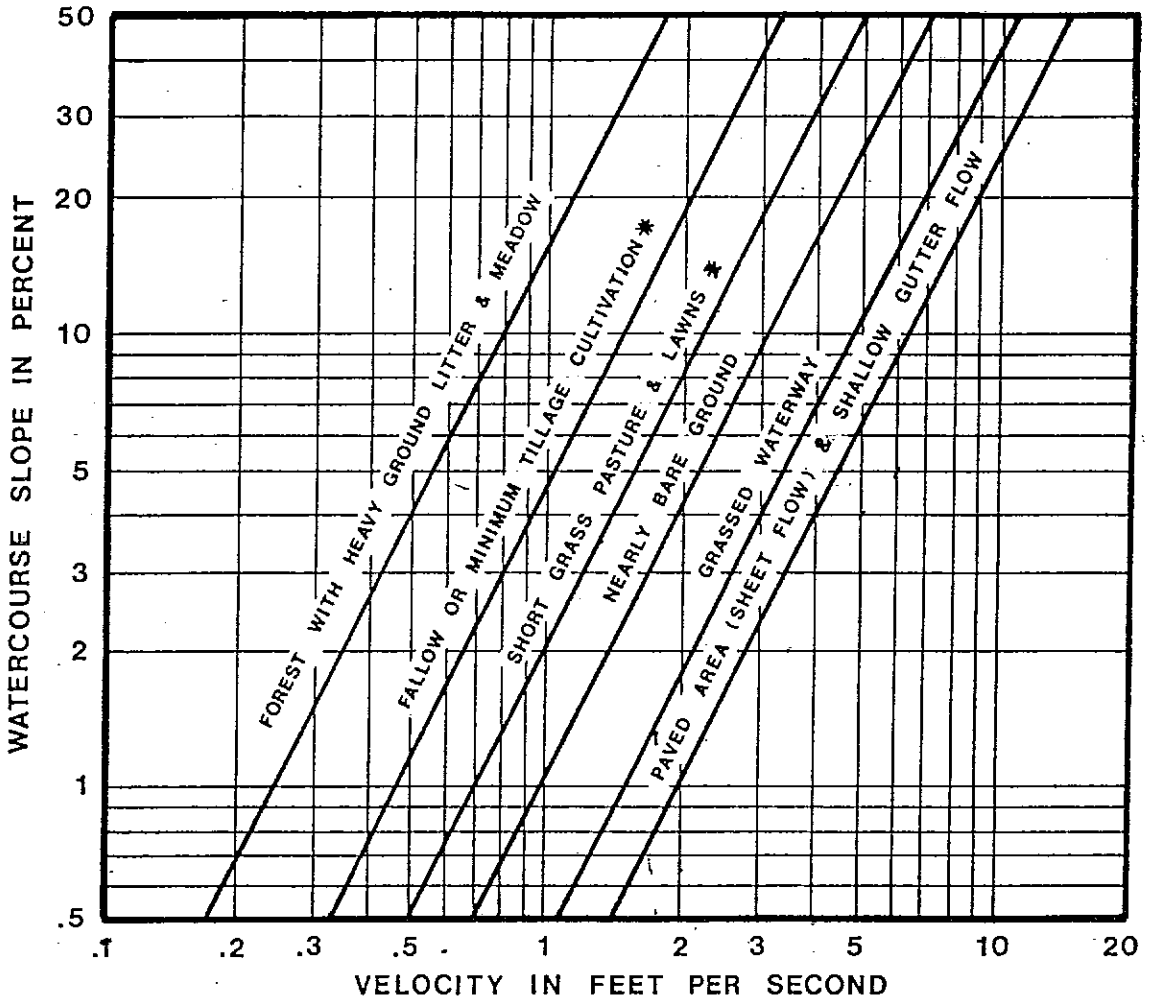


FIGURE 3-2. ESTIMATE OF AVERAGE FLOW VELOCITY FOR USE WITH THE RATIONAL FORMULA.

* MOST FREQUENTLY OCCURRING "UNDEVELOPED" LAND SURFACES IN THE DENVER REGION.

REFERENCE: "Urban Hydrology For Small Watersheds" Technical Release No. 55, USDA, SCS Jan. 1975.

TABLE 5-1

RECOMMENDED AVERAGE RUNOFF COEFFICIENTS AND PERCENT IMPERVIOUS

LAND USE OR SURFACE CHARACTERISTICS	PERCENT IMPERVIOUS	"C" FREQUENCY 10 A&B*	10 C&D*	100 A&B*	100 C&D*
Business					
Commercial Areas	95	0.90	0.90	0.90	0.90
Neighborhood Areas	70	0.75	0.75	0.80	0.80
Residential					
1/8 Acre or less	65	0.60	0.70	0.70	0.80
1/4 Acre	40	0.50	0.60	0.60	0.70
1/3 Acre	30	0.40	0.50	0.55	0.60
1/2 Acre	25	0.35	0.45	0.45	0.55
1 Acre	20	0.30	0.40	0.40	0.50
Industrial					
Light Areas	80	0.70	0.70	0.80	0.80
Heavy Areas	90	0.80	0.80	0.90	0.90
Parks and Cemeteries	7	0.30	0.35	0.55	0.60
Playgrounds	13	0.30	0.35	0.60	0.65
Railroad Yard Areas	40	0.50	0.55	0.60	0.65
Undeveloped Areas					
Historic Flow Analysis- Greenbelts, Agricultural	2	0.15	0.25	0.20	0.30
Pasture/Meadow	0	0.25	0.30	0.35	0.45
Forest	0	0.10	0.15	0.15	0.20
Exposed Rock	100	0.90	0.90	0.95	0.95
Offsite Flow Analysis (when land use not defined)	45	0.55	0.60	0.65	0.70
Streets					
Paved	100	0.90	0.90	0.95	0.95
Gravel	80	0.80	0.80	0.85	0.85
Drive and Walks	100	0.90	0.90	0.95	0.95
Roofs	90	0.90	0.90	0.95	0.95
Lawns	0	0.25	0.30	0.35	0.45

* Hydrologic Soil Group

9/30/90

TABLE 5-4
RUNOFF CURVE NUMBERS FOR HYDROLOGIC SOIL COVER COMPLEXES - RURAL CONDITIONS
(Antecedent Moisture Condition II, and Ia = 0.2 S)
(From: U.S. Dept. of Agriculture, Soil Conservation Service, 1977)

Land Use	Cover Treatment or Practice	Hydrologic Condition	Runoff Curve Number by Hydrologic Soil Group A	B	C	D
Fallow	Straight Row	----	77	86	91	94
Row Crops	Straight Row	Poor	72	81	88	91
	Straight Row	Good	67	78	85	89
	Contoured	Poor	70	79	84	88
	Contoured	Good	65	75	82	86
	Cont. & Terraced	Poor	66	74	80	82
	Cont. & Terraced	Good	62	71	78	81
Small Grain	Straight Row	Poor	65	76	84	88
	Straight Row	Good	63	75	83	87
	Contoured	Poor	63	74	82	85
	Contoured	Good	61	73	81	84
	Cont. & Terraced	Poor	61	72	79	82
	Cont. & Terraced	Good	59	70	78	81
Close-seeded legumes 1/ or rotation meadow	Straight Row	Poor	66	77	85	89
	Straight Row	Good	58	72	81	85
	Contoured	Poor	64	75	83	85
	Contoured	Good	55	69	78	83
	Cont. & Terraced	Poor	63	73	80	83
	Cont. & Terraced	Good	51	67	76	80
Pasture or range		Poor	68	79	86	89
		Fair	49	69	79	84
		Good	39	61	74	80
	Contoured	Poor	47	67	81	88
	Contoured	Fair	25	59	75	83
	Contoured	Good	6	35	70	79
Meadow		Good	30	58	71	78
Woods		Poor	45	66	77	83
		Fair	36	60	73	79
		Good	25	55	70	77
Farmsteads		----	59	74	82	86
Roads (dirt) 2/		----	72	82	87	89
(hard surface) 2/		----	74	84	90	92

1/ Close-drilled or broadcast
2/ Including right-of-way

TABLE 5-5
RUNOFF CURVE NUMBERS FOR HYDROLOGIC SOIL COVER COMPLEXES - URBAN AND SUBURBAN CONDITIONS 1/
(Antecedent Moisture Condition II)
(From: U.S. Dept. of Agriculture, Soil Conservation Service, 1977)

Land Use		Average % Impervious 3/	Hydrologic Soil Group A	B	C	D
Open spaces, lawns, parks, golf courses, cemeteries, etc.						
	Good condition: grass cover on 75% or more of the area		39*	61	74	80
	Fair condition: grass cover on 50% to 75% of the area		49*	69	79	84
Commercial and Business areas (85% Impervious)			89*	92	94	95
Industrial Districts 72% Impervious)			81*	88	91	93
Residential: 2/						
	Acres per Dwelling Unit					
	1/8 acre or less	65	77*	85	90	92
	1/4 acre	38	61*	75	83	87
	1/3 acre	30	57*	72	81	86
	1/2 acre	25	54*	70	80	85
	1 acre	20	51*	68	79	84
Paved parking lots, roofs, driveways, etc.			98	98	98	98
Streets and Roads:						
	paved with curbs and storm sewers		98	98	98	98
	gravel		76*	85	89	91
	dirt		72*	82	87	89

1/ For a more detailed description of agricultural land use curve numbers, refer to the National Engineering Handbook (U.S. Dept. of Agriculture, Soil Conservation Service, 1972).
2/ Curve numbers are computed assuming the runoff from the house and driveway is directed towards the street with a minimum of roof water directed to lawns where additional infiltration could occur.
3/ The remaining pervious areas (lawn) are considered to be in good pasture condition for these curve numbers.

* Not to be used wherever overlot grading or filling is to occur.

TABLE 5-6
RUNOFF CURVE NUMBERS FOR HYDROLOGIC SOIL
COVER COMPLEXES - RURAL CONDITIONS
(Antecedent Moisture Condition III, and Ia = 0.2 S)
(From: U.S. Dept. of Agriculture,
Soil Conservation Service, 1977)

NOTE: THIS TABLE TO BE USED FOR INFORMATION ONLY

Land Use	Cover Treatment or Practice	Hydrologic Condition	Runoff Curve Number by Hydrologic Soil Group A	B	C	D
Fallow	Straight Row	----	89	94	97	98
Row Crops	Straight Row	Poor	86	92	95	97
	Straight Row	Good	83	90	94	96
	Contoured	Poor	85	91	93	95
	Contoured	Good	82	88	92	94
	Cont. & Terraced	Poor	82	88	91	92
	Cont. & Terraced	Good	79	86	90	92
Small Grain	Straight Row	Poor	82	89	93	95
	Straight Row	Good	80	88	93	95
	Contoured	Poor	80	88	92	94
	Contoured	Good	78	87	92	93
	Cont. & Terraced	Poor	78	86	91	92
	Cont. & Terraced	Good	77	85	90	92
Close-seeded legumes 1/ or rotation meadow	Straight Row	Poor	82	89	94	96
	Straight Row	Good	76	86	92	94
	Contoured	Poor	81	88	93	94
	Contoured	Good	74	84	90	93
	Cont. & Terraced	Poor	80	87	91	93
	Cont. & Terraced	Good	70	83	89	91
Pasture or range		Poor	84	91	94	96
		Fair	69	84	91	93
		Good	59	78	88	91
	Contoured	Poor	67	83	92	95
	Contoured	Fair	64	77	88	93
	Contoured	Good	15	55	85	91
Meadow		Good	50	76	86	90
Woods		Poor	65	82	89	93
		Fair	56	78	87	91
		Good	43	74	85	89
Farmsteads		----	77	88	92	94
Roads (dirt) 2/		----	86	92	95	96
(hard surface) 2/		----	88	93	96	97

1/ Close-drilled or broadcast
2/ Including right-of-way

TABLE 5-7
RUNOFF CURVE NUMBERS FOR HYDROLOGIC SOIL
COVER COMPLEXES - URBAN AND SUBURBAN CONDITIONS 1/
(Antecedent Moisture Condition III)
(From: U.S. Dept. of Agriculture,
Soil Conservation Service, 1977)

NOTE: THIS TABLE TO BE USED FOR INFORMATION ONLY

Land Use		Average % Impervious 3/	Hydrologic Soil Group A	B	C	D
Open spaces, lawns, parks, golf courses, cemeteries, etc.						
	Good condition: grass cover on 75% or more of the area		59*	78	88	91
	Fair condition: grass cover on 50% to 75% of the area		69*	84	91	93
Commercial and Business areas (85% Impervious)			96*	97	98	98
Industrial Districts 72% Impervious)			92*	95	97	98
Residential: 2/						
Acres per Dwelling Unit						
1/8 acre or less		65	89*	94	96	97
1/4 acre		38	78*	88	93	95
1/3 acre		30	75*	86	92	94
1/2 acre		25	73*	85	91	94
1 acre		20	70*	84	91	93
Paved parking lots, roofs, driveways, etc.			99	99	99	99
Streets and Roads:						
paved with curbs and storm sewers			99	99	99	99
gravel			89*	94	96	97
dirt			86*	92	95	96

1/ For a more detailed description of agricultural land use curve numbers, refer to the National Engineering Handbook (U.S. Dept. of Agriculture, Soil Conservation Service, 1972).
2/ Curve numbers are computed assuming the runoff from the house and driveway is directed towards the street with a minimum of roof water directed to lawns where additional infiltration could occur.
3/ The remaining pervious areas (lawn) are considered to be in good pasture condition for these curve numbers.

* Not to be used wherever overlot grading or filling is to occur.

TR-20 PRINTOUT
EXISTING CONDITIONS

1

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                                          SUMMARY
TITLE   1 STRATTON BASIN W/ EX. DEVEL./EX. FACILITIES -  10 & 100 YEAR FLOWS
TITLE     24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR
 5 RAINFL 9                    .0833
 8                  0.0      0.0173      0.0493      0.1201      0.2498
 8               0.4659      0.5696      0.6180      0.6551      0.6880
 8               0.7156      0.7433      0.7710      0.7986      0.8263
 8               0.8539      0.8755      0.8920      0.9084      0.9248
 8               0.9421      0.9576      0.9741      0.9888         1.0
 9 ENDTBL
 5 RAINFL 8                    .0833
 8                  .0       .0087       .0346       .0744       .1436
 8                .2647       .4810       .6021       .6713       .7249
 8                .7682       .8028       .8374       .8720       .8893
 8                .9066       .9170       .9273       .9377       .9481
 8                .9585       .9689       .9792       .9896         1.0
 9 ENDTBL
 5 RAINFL 7                     .25
 8                   0       0.0005      0.0015       .0030      0.0045
 8               0.006        .008         .01         .012        .0143
 8               .0165        .0188        .021        .0233       .0255
 8               .0278        .032         .039        .046        .053
 8                 .06        .075          .1          .4          .7
 8                .725         .75         .765         .78         .79
 8                  .8         .81          .82         .825        .83
 8                .835         .84         .845         .85         .855
 8                 .86        .8638        .8675       .8713       .875
 8               .8788        .8825        .8863        .89        .8938
 8               .8975        .9013        .905        .9083       .9115
 8               .9148        .918         .921        .924        .927
 8                 .93        .9325        .935        .9375        .94
 8               .9425        .945         .9475        .95        .9525
 8                .955        .9575         .96        .9625        .965
 8               .9675         .97         .9725        .975        .9775
 8                 .98        .9813        .9825       .9838        .985
 8               .9863        .9875        .9888         .99        .9913
 8               .9925        .9938         .995       .9963       .9975
 8               .9988          1.0          1.0         1.0          1.0
 9 ENDTBL
 5 RAINFL 9                   0.0833
 8                  0.0      0.0173      0.0493      0.1201      0.2498
 8               0.4659      0.5696      0.6180      0.6551      0.6880
 8               0.7156      0.7433      0.7710      0.7986      0.8263
 8               0.8539      0.8755      0.8920      0.9084      0.9248
 8               0.9421      0.9576      0.9741      0.9888         1.0
 9 ENDTBL
```

1

**********80-80 LIST OF INPUT DATA (CONTINUED)**********

```
 3 STRUCT      01
 8                          57.7          0.0          0.0
 8                          60.0         14.5           .8
 8                           62.         27.          1.4
 8                           64.         35.          7.3
 8                          64.5         74.          8.7
 8                          64.7        174.           9.
 8                           65.        495.          10.
 9 ENDTBL
 3 STRUCT      03
 8                           79.          0.0          0.0
 8                           84.       139.42         .137
 8                           86.       203.86          .58
 8                           88.       242.26         1.652
 8                           90.       279.03         3.739
 8                           94.       348.02        10.929
```

```
  6 ADDHYD 4 023   5 6 1                                  1 1   1   1
1


**********80-80 LIST OF INPUT DATA (CONTINUED)**********

  6 ADDHYD 4 050   1 7 5                                  1 1   1   1
  6 RUNOFF 1 040       5 .224        88.8        0.48     1     1   1
  6 RUNOFF 1 041       5 .198        76.7        0.57     1     1   1
  6 RUNOFF 1 042       5 .135        78.2        0.50     1     1   1
  6 RUNOFF 1 043       5 .039        84.0        0.23     1     1   1
    ENDATA
  7 INCREM 6                     .083
  7 COMPUT 7 044   043            0.0        4.50        1.07 2   1   1
    ENDCMP 1
  7 COMPUT 7 044   043            0.0        3.20        1.07 2   1   2
    ENDCMP 1
  7 COMPUT 7 044   043            0.0        3.05        1.08 3   2   1
    ENDCMP 1
  7 COMPUT 7 044   043            0.0        2.06        1.09 3   2   2
    ENDCMP 1
    ENDJOB 2
0**********END OF 80-80 LIST**********
1


TR20 XEQ                    STRATTON BASIN W/ EX. DEVEL./EX. FACILITIES -  10 & 100 YEAR FLOWS          JOB  1   PASS   1
     REV 09/01/83           24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR                              PAGE   1


 FILE NO.  1
0                              COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY  USER NOTES

          THE USERS MANUAL FOR THIS PROGRAM IS THE MAY 1982 DRAFT OF TR-20.  CHANGES FROM THE 2/14/74 VERSION INCLUDE:

          REACH ROUTING - THE MODIFIED ATT-KIN ROUTING PROCEDURE REPLACES THE CONVEX METHOD.  INPUT DATA PREPARED FOR
             PREVIOUS PROGRAM VERSIONS USING CONVEX ROUTING COEFFICIENTS WILL NOT RUN ON THIS VERSION.

             THE PREFERRED TYPE OF DATA ENTRY IS CROSS SECTION DATA REPRESENTATIVE OF A REACH.  IT IS RECOMMENDED THAT
             THE OPTIONAL CROSS SECTION DISCHARGE-AREA PLOTS BE OBTAINED WHENEVER NEW CROSS SECTION DATA IS ENTERED.
             THE PLOTS SHOULD BE CHECKED FOR REASONABLENESS AND ADEQUACY OF INPUT DATA FOR THE COMPUTATION OF "M"
             VALUES USED IN THE ROUTING PROCEDURE.

             GUIDELINES FOR DETERMINING OR ANALYZING REACH LENGTHS AND COEFFICIENTS (X,M) ARE AVAILABLE IN THE USERS
             MANUAL.  SUMMARY TABLE 2 DISPLAYS REACH ROUTING RESULTS AND ROUTING PARAMETERS FOR COMPARISON AND CHECKING.

          HYDROGRAPH GENERATION - THE PROCEDURE TO CALCULATE THE INTERNAL TIME INCREMENT AND PEAK TIME OF THE UNIT
             HYDROGRAPH HAVE BEEN IMPROVED.  PEAK DISCHARGES AND TIMES MAY DIFFER FROM THE PREVIOUS VERSION.  OUTPUT
             HYDROGRAPHS ARE STILL INTERPOLATED, PRINTED, AND ROUTED AT THE USER SELECTED MAIN TIME INCREMENT.

          INTERMEDIATE PEAKS - METHOD ADDED TO PROVIDE DISCHARGES AT INTERMEDIATE POINTS WITHIN REACHES WITHOUT ROUTING.

          OTHER - THIS VERSION CONTAINS SOME ADDITIONS TO THE INPUT AND NUMEROUS MODIFICATIONS TO THE OUTPUT.  USER
             OPTIONS HAVE BEEN MODIFIED AND AUGMENTED ON THE JOB RECORD, RAINTABLES ADDED, ERROR AND WARNING MESSAGES
             EXPANDED, AND THE SUMMARY TABLES COMPLETELY REVISED.  THE HOLDOUT OPTION IS NOT OPERATIONAL AT THIS TIME.

          PROGRAM QUESTIONS OR PROBLEMS SHOULD BE DIRECTED TO HYDRAULIC ENGINEERS AT THE SCS NATIONAL TECHNICAL CENTERS:

               CHESTER, PA (NORTHEAST)  -- 215-499-3933,       FORT WORTH, TX (SOUTH) -- 334-5242 (FTS)
               LINCOLN, NB (MIDWEST)    -- 541-5318 (FTS),     PORTLAND, OR (WEST)    -- 423-4099 (FTS)
               OR HYDROLOGY UNIT, ENGINEERING DIVISION, LANHAM, MD -- 436-7383 (FTS).


        PROGRAM CHANGES SINCE MAY 1982:

              12/17/82 - CORRECT PEAK RATE FACTOR FOR USER ENTERED DIMHYD
                         CORRECT REACH ROUTING PEAK TRAVEL TIME PRINTED WITH FULLPRINT OPTION
               5/02/83 - CORRECT COMPUTATIONS FOR ---
                                 1. DIVISION OF BASEFLOW IN DIVERT OPERATION
                                 2. HYDROGRAPH VOLUME SPLIT BETWEEN BASEFLOW AND ABOVE BASEFLOW
                                 3. CROSS SECTION DATA PLOTTING POSITION
                                 4. INTERMEDIATE PEAK WHEN "FROM" AREA IS LARGER THAN "THRU" AREA
                                 5. STORAGE ROUTED REACH TRAVEL TIME FOR MULTIPEAK HYDROGRAPH
                                 6. ORDERING "FLOW-FREQ" FILE FROM SUMMARY TABLE #3 DATA
                                 7. BASEFLOW ENTERED WITH READHYD
                                 8. LOW FLOW SPLIT DURING DIVERT PROCEDURE #2 WHEN SECTION RATINGS START AT DIFFERENT ELEVATIONS
                           ENHANCEMENTS ---
                                 1. REPLACE USER MANUAL ERROR CODES (PAGE 4-9 TO 4-11) WITH MESSAGES
                                 2. LABEL OUTPUT HYDROGRAPH FILES WITH CROSS SECTION/STRUCTURE, ALTERNATE AND STORM NO'S
```

09/01/83 - CORRECT INPUT AND OUTPUT ERRORS FOR INTERMEDIATE PEAKS
CORRECT COMBINATION OF RATING TABLES FOR DIVERT
CHECK REACH ROUTING PARAMETERS FOR ACCEPTABLE LIMITS
ELIMINATE MINIMUM REACH TRAVEL TIME WHEN ATT-KIN COEFFICIENT EQUALS ONE

1

CUMULATIVE RAINFALL TABLE 9 TIME INCREMENT= .08

8	.0000	.0173	.0493	.1201	.2498
8	.4659	.5696	.6180	.6551	.6880
8	.7156	.7433	.7710	.7986	.8263
8	.8539	.8755	.8920	.9084	.9248
8	.9421	.9576	.9741	.9888	1.0000

9 ENDTBL

CUMULATIVE RAINFALL TABLE 8 TIME INCREMENT= .08

8	.0000	.0087	.0346	.0744	.1436
8	.2647	.4810	.6021	.6713	.7249
8	.7682	.8028	.8374	.8720	.8893
8	.9066	.9170	.9273	.9377	.9481
8	.9585	.9689	.9792	.9896	1.0000

9 ENDTBL

CUMULATIVE RAINFALL TABLE 7 TIME INCREMENT= .25

8	.0000	.0005	.0015	.0030	.0045
8	.0060	.0080	.0100	.0120	.0143
8	.0165	.0188	.0210	.0233	.0255
8	.0278	.0320	.0390	.0460	.0530
8	.0600	.0750	.1000	.4000	.7000
8	.7250	.7500	.7650	.7800	.7900
8	.8000	.8100	.8200	.8250	.8300
8	.8350	.8400	.8450	.8500	.8550
8	.8600	.8638	.8675	.8713	.8750
8	.8788	.8825	.8863	.8900	.8938
8	.8975	.9013	.9050	.9083	.9115
8	.9148	.9180	.9210	.9240	.9270
8	.9300	.9325	.9350	.9375	.9400
8	.9425	.9450	.9475	.9500	.9525
8	.9550	.9575	.9600	.9625	.9650
8	.9675	.9700	.9725	.9750	.9775
8	.9800	.9813	.9825	.9838	.9850
8	.9863	.9875	.9888	.9900	.9913
8	.9925	.9938	.9950	.9963	.9975
8	.9988	1.0000	1.0000	1.0000	1.0000

9 ENDTBL

1

CUMULATIVE RAINFALL TABLE 9 TIME INCREMENT= .08

8	.0000	.0173	.0493	.1201	.2498
8	.4659	.5696	.6180	.6551	.6880
8	.7156	.7433	.7710	.7986	.8263
8	.8539	.8755	.8920	.9084	.9248
8	.9421	.9576	.9741	.9888	1.0000

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 1

	ELEVATION	DISCHARGE	STORAGE
8	57.70	.00	.00
8	60.00	14.50	.80
8	62.00	27.00	1.40
8	64.00	35.00	7.30
8	64.50	74.00	8.70
8	64.70	174.00	9.00
8	65.00	495.00	10.00

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 3

	ELEVATION	DISCHARGE	STORAGE
8	79.00	.00	.00
8	84.00	139.42	.14
8	86.00	203.86	.58
8	88.00	242.26	1.65
8	90.00	279.03	3.74
8	94.00	348.02	10.93

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 4

	ELEVATION	DISCHARGE	STORAGE
8	34.00	.00	.00
8	35.00	11.56	.12
8	36.00	35.06	.73
8	38.00	106.30	3.49
8	40.00	203.37	7.57
8	42.00	265.49	12.30
8	42.60	278.92	13.94
8	44.00	429.07	17.81

1

8	44.50	752.97	22.31
8	48.00	1667.44	31.00

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 5

	ELEVATION	DISCHARGE	STORAGE
8	70.00	.00	.00
8	71.00	92.00	15.00
8	72.00	227.00	40.00
8	73.00	360.00	69.00
8	74.00	520.00	90.00
8	75.00	915.00	127.00
8	75.50	1180.00	147.00

9 ENDTBL

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 44
OUTPUT HYDROGRAPH = 5
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

			RECORD ID
DATA FIELD VALUES =	.1040	74.5000	.4400

STANDARD CONTROL OPERATION REACH STRUCTURE 1
INPUT HYDROGRAPH = 5 OUTPUT HYDROGRAPH = 6
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

			RECORD ID
DATA FIELD VALUES =	3300.0000	.5000	1.3300

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 45
OUTPUT HYDROGRAPH = 5
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

			RECORD ID
DATA FIELD VALUES =	.0830	74.5000	.3300

STANDARD CONTROL OPERATION ADDHYD CROSS SECTION 45
INPUT HYDROGRAPHS = 5,6 OUTPUT HYDROGRAPH = 7
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

			RECORD ID
DATA FIELD VALUES =	.0000	.0000	.0000

STANDARD CONTROL OPERATION RUNOFF STRUCTURE 1
OUTPUT HYDROGRAPH = 2
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

			RECORD ID
DATA FIELD VALUES =	.1350	74.5000	.2200

```
        OUTPUT HYDROGRAPH = 2                                    DATA FIELD VALUES =      .0680     71.0000       .2000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   5                                                  RECORD ID
        OUTPUT HYDROGRAPH = 3                                    DATA FIELD VALUES =      .0610     77.0000       .2000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   5                                                  RECORD ID
        INPUT HYDROGRAPHS = 1,2    OUTPUT HYDROGRAPH = 4         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   5                                                  RECORD ID
        INPUT HYDROGRAPHS = 3,4    OUTPUT HYDROGRAPH = 7         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION REACH    CROSS SECTION   7                                                  RECORD ID
        INPUT HYDROGRAPH = 7       OUTPUT HYDROGRAPH = 1         DATA FIELD VALUES =   1500.0000      .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  46                                                  RECORD ID
        OUTPUT HYDROGRAPH = 4                                    DATA FIELD VALUES =      .1020     76.0000       .2900
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   STRUCTURE  5                                                   RECORD ID
        OUTPUT HYDROGRAPH = 3                                    DATA FIELD VALUES =      .1690     76.0000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   STRUCTURE  5                                                   RECORD ID
        INPUT HYDROGRAPHS = 4,3    OUTPUT HYDROGRAPH = 2         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RESVOR   STRUCTURE  5                                                   RECORD ID
        INPUT HYDROGRAPH = 2       OUTPUT HYDROGRAPH = 3         DATA FIELD VALUES =     70.0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  ELEV  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  61                                                  RECORD ID
        OUTPUT HYDROGRAPH = 4                                    DATA FIELD VALUES =      .0340     85.0000       .1500
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION  61                                                  RECORD ID
        INPUT HYDROGRAPHS = 3,4    OUTPUT HYDROGRAPH = 5         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

1


TR20 XEQ                    STRATTON BASIN W/ EX. DEVEL./EX. FACILITIES -  10 & 100 YEAR FLOWS          JOB  1   PASS   1
     REV 09/01/83           24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR                                PAGE   7


   STANDARD CONTROL OPERATION REACH    CROSS SECTION   6                                                  RECORD ID
        INPUT HYDROGRAPH = 5       OUTPUT HYDROGRAPH = 4         DATA FIELD VALUES =   2700.0000      .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   6                                                  RECORD ID
        OUTPUT HYDROGRAPH = 5                                    DATA FIELD VALUES =      .1590     81.0000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   7                                                  RECORD ID
        INPUT HYDROGRAPHS = 4,5    OUTPUT HYDROGRAPH = 6         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   7                                                  RECORD ID
        INPUT HYDROGRAPHS = 1,6    OUTPUT HYDROGRAPH = 7         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION REACH    CROSS SECTION   8                                                  RECORD ID
        INPUT HYDROGRAPH = 7       OUTPUT HYDROGRAPH = 1         DATA FIELD VALUES =    800.0000      .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   8                                                  RECORD ID
        OUTPUT HYDROGRAPH = 2                                    DATA FIELD VALUES =      .1160     81.0000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   8                                                  RECORD ID
        INPUT HYDROGRAPHS = 1,2    OUTPUT HYDROGRAPH = 7         DATA FIELD VALUES =      .0000      .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION REACH    CROSS SECTION   9                                                  RECORD ID
        INPUT HYDROGRAPH = 7       OUTPUT HYDROGRAPH = 1         DATA FIELD VALUES =   1100.0000      .5000      1.3300
```

```
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   9                                                    RECORD ID
          OUTPUT HYDROGRAPH = 2                                  DATA FIELD VALUES =       .1470     81.0000       .4000
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   9                                                    RECORD ID
          INPUT HYDROGRAPHS = 1,2    OUTPUT HYDROGRAPH = 7       DATA FIELD VALUES =       .0000      .0000       .0000
          OUTPUT OPTIONS IN EFFECT  PEAK  HYD   VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   STRUCTURE 21                                                         RECORD ID
          OUTPUT HYDROGRAPH = 2                                  DATA FIELD VALUES =       .1390     84.0000       .2600
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION REACH    STRUCTURE 20                                                         RECORD ID
          INPUT HYDROGRAPH = 2       OUTPUT HYDROGRAPH = 6       DATA FIELD VALUES =    2200.0000      .5000      1.3300
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

1


TR20 XEQ                    STRATTON BASIN W/ EX. DEVEL./EX. FACILITIES -  10 & 100 YEAR FLOWS          JOB  1   PASS   1
     REV 09/01/83           24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR                                PAGE   8


   STANDARD CONTROL OPERATION RUNOFF   STRUCTURE 20                                                         RECORD ID
          OUTPUT HYDROGRAPH = 2                                  DATA FIELD VALUES =       .1030     84.0000       .2700
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   STRUCTURE 20                                                         RECORD ID
          INPUT HYDROGRAPHS = 6,2    OUTPUT HYDROGRAPH = 1       DATA FIELD VALUES =       .0000      .0000       .0000
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION REACH    CROSS SECTION  21                                                    RECORD ID
          INPUT HYDROGRAPH = 1       OUTPUT HYDROGRAPH = 2       DATA FIELD VALUES =    3200.0000      .5000      1.3300
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  21                                                    RECORD ID
          OUTPUT HYDROGRAPH = 3                                  DATA FIELD VALUES =       .0760     87.0000       .4000
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  24                                                    RECORD ID
          OUTPUT HYDROGRAPH = 1                                  DATA FIELD VALUES =       .0810     79.0000       .3000
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   STRUCTURE 21                                                         RECORD ID
          INPUT HYDROGRAPHS = 2,3    OUTPUT HYDROGRAPH = 6       DATA FIELD VALUES =       .0000      .0000       .0000
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   STRUCTURE 21                                                         RECORD ID
          INPUT HYDROGRAPHS = 1,6    OUTPUT HYDROGRAPH = 4       DATA FIELD VALUES =       .0000      .0000       .0000
          OUTPUT OPTIONS IN EFFECT  SUM

   STANDARD CONTROL OPERATION REACH    CROSS SECTION  22                                                    RECORD ID
          INPUT HYDROGRAPH = 4       OUTPUT HYDROGRAPH = 5       DATA FIELD VALUES =    4000.0000      .5000      1.3300
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  22                                                    RECORD ID
          OUTPUT HYDROGRAPH = 6                                  DATA FIELD VALUES =       .1250     79.0000       .1000
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION  23                                                    RECORD ID
          INPUT HYDROGRAPHS = 5,6    OUTPUT HYDROGRAPH = 1       DATA FIELD VALUES =       .0000      .0000       .0000
          OUTPUT OPTIONS IN EFFECT  PEAK  HYD   VOL   SUM

   STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION  50                                                    RECORD ID
          INPUT HYDROGRAPHS = 1,7    OUTPUT HYDROGRAPH = 5       DATA FIELD VALUES =       .0000      .0000       .0000
          OUTPUT OPTIONS IN EFFECT  PEAK  HYD   VOL   SUM

   STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  40                                                    RECORD ID
          OUTPUT HYDROGRAPH = 5                                  DATA FIELD VALUES =       .2240     88.0000       .4800
          OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

1


TR20 XEQ                    STRATTON BASIN W/ EX. DEVEL./EX. FACILITIES -  10 & 100 YEAR FLOWS          JOB  1   PASS   1
     REV 09/01/83           24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR                                PAGE   9
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STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 41 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .1980 76.7000 .5700
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 42 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .1350 78.2000 .5000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 43 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .0390 84.0000 .2300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID
+ FROM XSECTION 44
+ TO XSECTION 43
STARTING TIME = .00 RAIN DEPTH = 4.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .08 HOURS

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	139.43	(RUNOFF)
9.94	4.40	(RUNOFF)
19.92	2.32	(RUNOFF)
23.89	1.18	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 134.84 CFS-HRS, 11.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	88.86	64.53
13.16	3.37	58.23
20.13	2.32	58.07

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 134.63 CFS-HRS, 11.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	128.75	(RUNOFF)
7.93	6.87	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 107.62 CFS-HRS, 8.89 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	157.54	(NULL)
12.85	6.07	(NULL)
19.90	4.17	(NULL)
23.83	2.12	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 242.25 CFS-HRS, 20.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	246.50	(RUNOFF)
7.93	11.20	(RUNOFF)
9.93	5.72	(RUNOFF)
19.90	3.02	(RUNOFF)

23.78 1.56 (RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 175.23 CFS-HRS, 14.48 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.05	389.76	64.90
12.80	10.48	59.36
13.67	9.36	59.18
19.90	7.19	58.84
23.80	3.68	58.28

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 417.48 CFS-HRS, 34.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	261.61	64.78
19.97	7.17	58.84
23.87	3.65	58.28

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .32 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.02	.77	5.30
4.98	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.82	58.54

1

5.81	DISCHG	18.06	28.09	30.55	33.63	65.88	251.08	205.36	169.48	152.70	140.61
5.81	ELEV	60.57	62.27	62.89	63.66	64.40	64.77	64.73	64.69	64.66	64.63
6.64	DISCHG	126.68	111.17	97.54	86.80	78.05	73.43	71.70	68.94	65.54	61.91
6.64	ELEV	64.61	64.57	64.55	64.53	64.51	64.49	64.47	64.44	64.39	64.34
7.47	DISCHG	58.27	54.77	51.47	48.41	45.62	43.11	40.87	38.86	36.86	34.98
7.47	ELEV	64.30	64.25	64.21	64.17	64.14	64.10	64.08	64.05	64.02	64.00
8.30	DISCHG	34.86	34.72	34.57	34.41	34.25	34.09	33.92	33.75	33.57	33.40
8.30	ELEV	63.96	63.93	63.89	63.85	63.81	63.77	63.73	63.69	63.64	63.60
9.13	DISCHG	33.22	33.05	32.87	32.70	32.52	32.35	32.18	32.01	31.84	31.67
9.13	ELEV	63.56	63.51	63.47	63.42	63.38	63.34	63.29	63.25	63.21	63.17
9.96	DISCHG	31.50	31.34	31.17	31.00	30.83	30.65	30.47	30.29	30.11	29.94
9.96	ELEV	63.13	63.08	63.04	63.00	62.96	62.91	62.87	62.82	62.78	62.73
10.79	DISCHG	29.76	29.58	29.41	29.23	29.06	28.89	28.72	28.55	28.38	28.22
10.79	ELEV	62.69	62.65	62.60	62.56	62.52	62.47	62.43	62.39	62.35	62.30
11.62	DISCHG	28.05	27.89	27.73	27.56	27.41	27.25	27.09	26.09	24.00	22.19
11.62	ELEV	62.26	62.22	62.18	62.14	62.10	62.06	62.02	61.85	61.52	61.23
12.45	DISCHG	20.62	19.26	18.07	17.05	16.17	15.41	14.75	14.21	13.75	13.32
12.45	ELEV	60.98	60.76	60.57	60.41	60.27	60.15	60.04	59.95	59.88	59.81
13.28	DISCHG	12.92	12.54	12.19	11.87	11.58	11.32	11.09	10.88	10.69	10.52
13.28	ELEV	59.75	59.69	59.63	59.58	59.54	59.50	59.46	59.43	59.40	59.37
14.11	DISCHG	10.35	10.19	10.03	9.88	9.74	9.61	9.50	9.39	9.29	9.21
14.11	ELEV	59.34	59.32	59.29	59.27	59.25	59.22	59.21	59.19	59.17	59.16
14.94	DISCHG	9.13	9.05	8.98	8.88	8.76	8.64	8.51	8.39	8.28	8.17
14.94	ELEV	59.15	59.14	59.12	59.11	59.09	59.07	59.05	59.03	59.01	59.00
15.77	DISCHG	8.07	7.98	7.89	7.81	7.73	7.67	7.60	7.55	7.50	7.46
15.77	ELEV	58.98	58.97	58.95	58.94	58.93	58.92	58.91	58.90	58.89	58.88
16.60	DISCHG	7.42	7.38	7.35	7.32	7.30	7.27	7.25	7.24	7.22	7.21
16.60	ELEV	58.88	58.87	58.87	58.86	58.86	58.85	58.85	58.85	58.85	58.84
17.43	DISCHG	7.20	7.19	7.18	7.18	7.17	7.16	7.16	7.16	7.15	7.15
17.43	ELEV	58.84	58.84	58.84	58.84	58.84	58.84	58.84	58.84	58.83	58.83
18.26	DISCHG	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15
18.26	ELEV	58.83	58.83	58.83	58.83	58.83	58.83	58.83	58.83	58.83	58.83
19.09	DISCHG	7.15	7.15	7.16	7.16	7.16	7.16	7.16	7.16	7.17	7.17
19.09	ELEV	58.83	58.83	58.84	58.84	58.84	58.84	58.84	58.84	58.84	58.84
19.92	DISCHG	7.17	7.17	7.16	7.08	6.93	6.74	6.53	6.32	6.10	5.90
19.92	ELEV	58.84	58.84	58.84	58.82	58.80	58.77	58.74	58.70	58.67	58.64
20.75	DISCHG	5.71	5.52	5.35	5.18	5.02	4.88	4.75	4.64	4.53	4.43
20.75	ELEV	58.61	58.58	58.55	58.52	58.50	58.47	58.45	58.44	58.42	58.40
21.58	DISCHG	4.34	4.25	4.19	4.13	4.07	4.02	3.97	3.92	3.89	3.86
21.58	ELEV	58.39	58.37	58.36	58.35	58.35	58.34	58.33	58.32	58.32	58.31
22.41	DISCHG	3.84	3.81	3.78	3.76	3.74	3.73	3.72	3.71	3.69	3.68
22.41	ELEV	58.31	58.30	58.30	58.30	58.29	58.29	58.29	58.29	58.29	58.28
23.24	DISCHG	3.68	3.67	3.67	3.66	3.65	3.64	3.64	3.65	3.65	3.64
23.24	ELEV	58.28	58.28	58.28	58.28	58.28	58.28	58.28	58.28	58.28	58.28
24.07	DISCHG	3.62	3.55	3.40	3.20	2.99	2.77	2.56	2.35	2.15	1.96
24.07	ELEV	58.27	58.26	58.24	58.21	58.17	58.14	58.11	58.07	58.04	58.01

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 418.36 CFS-HRS, 34.57 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	125.96	(RUNOFF)
7.93	5.84	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.42 WATERSHED INCHES, 98.57 CFS-HRS, 8.15 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.60	140.30	(NULL)
20.07	7.17	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.00 WATERSHED INCHES, 414.75 CFS-HRS, 34.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	74.28	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.42 WATERSHED INCHES, 98.38 CFS-HRS, 8.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	146.16	(RUNOFF)
9.94	4.62	(RUNOFF)
19.94	2.46	(RUNOFF)
23.87	1.26	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.82 WATERSHED INCHES, 136.11 CFS-HRS, 11.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.02	206.98	(RUNOFF)
7.93	8.54	(RUNOFF)
9.92	4.33	(RUNOFF)
19.90	2.25	(RUNOFF)
23.77	1.17	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.38 WATERSHED INCHES, 142.93 CFS-HRS, 11.81 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	167.45	84.87
6.37	187.66	85.50
19.96	9.63	79.35
23.84	4.92	79.18

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.06	1.43	9.94
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.05	79.36
5.81	DISCHG	31.54	69.26	114.25	152.24	167.19	159.15	185.65	187.48	182.53	176.59

5.81	ELEV	80.13	81.48	83.10	84.40	84.86	84.61	85.43	85.49	85.34	85.15
6.64	DISCHG	169.80	160.71	149.87	138.38	127.47	117.25	108.29	100.79	94.34	88.73
6.64	ELEV	84.94	84.66	84.32	83.96	83.57	83.20	82.88	82.61	82.38	82.18
7.47	DISCHG	83.74	79.20	74.98	71.04	67.35	63.93	60.76	57.78	54.67	51.29
7.47	ELEV	82.00	81.84	81.69	81.55	81.42	81.29	81.18	81.07	80.96	80.84
8.30	DISCHG	47.94	45.38	43.57	42.28	41.33	40.62	40.07	39.63	39.27	38.97
8.30	ELEV	80.72	80.63	80.56	80.52	80.48	80.46	80.44	80.42	80.41	80.40
9.13	DISCHG	38.70	38.46	38.24	38.03	37.84	37.65	37.47	37.29	37.11	36.94
9.13	ELEV	80.39	80.38	80.37	80.36	80.36	80.35	80.34	80.34	80.33	80.32
9.96	DISCHG	36.77	36.58	36.32	35.94	35.53	35.14	34.82	34.55	34.32	34.13
9.96	ELEV	80.32	80.31	80.30	80.29	80.27	80.26	80.25	80.24	80.23	80.22
10.79	DISCHG	33.95	33.77	33.58	33.39	33.21	33.04	32.88	32.72	32.54	32.36
10.79	ELEV	80.22	80.21	80.20	80.20	80.19	80.18	80.18	80.17	80.17	80.16
11.62	DISCHG	32.18	32.02	31.87	31.72	31.55	31.37	31.21	31.06	30.69	29.86
11.62	ELEV	80.15	80.15	80.14	80.14	80.13	80.13	80.12	80.11	80.10	80.07
12.45	DISCHG	28.75	27.51	26.24	25.00	23.84	22.75	21.73	20.80	19.94	19.15
12.45	ELEV	80.03	79.99	79.94	79.90	79.85	79.82	79.78	79.75	79.72	79.69
13.28	DISCHG	18.41	17.75	17.16	16.64	16.17	15.77	15.42	15.10	14.80	14.52
13.28	ELEV	79.66	79.64	79.62	79.60	79.58	79.57	79.55	79.54	79.53	79.52
14.11	DISCHG	14.25	13.98	13.73	13.50	13.29	13.10	12.94	12.79	12.65	12.52
14.11	ELEV	79.51	79.50	79.49	79.48	79.48	79.47	79.46	79.46	79.45	79.45
14.94	DISCHG	12.40	12.30	12.17	12.00	11.80	11.60	11.43	11.28	11.15	11.02
14.94	ELEV	79.44	79.44	79.44	79.43	79.42	79.42	79.41	79.40	79.40	79.40
15.77	DISCHG	10.90	10.79	10.68	10.58	10.48	10.40	10.31	10.24	10.17	10.10
15.77	ELEV	79.39	79.39	79.38	79.38	79.38	79.37	79.37	79.37	79.36	79.36
16.60	DISCHG	10.04	9.99	9.94	9.90	9.86	9.82	9.79	9.76	9.74	9.72
16.60	ELEV	79.36	79.36	79.36	79.35	79.35	79.35	79.35	79.35	79.35	79.35
17.43	DISCHG	9.70	9.68	9.67	9.65	9.64	9.63	9.63	9.62	9.61	9.61
17.43	ELEV	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.34	79.34	79.34
18.26	DISCHG	9.61	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
18.26	ELEV	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34
19.09	DISCHG	9.60	9.60	9.61	9.61	9.61	9.61	9.61	9.62	9.62	9.62
19.09	ELEV	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.35
19.92	DISCHG	9.62	9.63	9.58	9.41	9.12	8.81	8.52	8.27	8.04	7.84
19.92	ELEV	79.35	79.35	79.34	79.34	79.33	79.32	79.31	79.30	79.29	79.28

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20.75	DISCHG	7.65	7.47	7.28	7.08	6.89	6.71	6.56	6.42	6.28	6.13
20.75	ELEV	79.27	79.27	79.26	79.25	79.25	79.24	79.24	79.23	79.23	79.22
21.58	DISCHG	5.99	5.88	5.78	5.70	5.61	5.52	5.43	5.37	5.32	5.28
21.58	ELEV	79.21	79.21	79.21	79.20	79.20	79.20	79.19	79.19	79.19	79.19
22.41	DISCHG	5.24	5.18	5.13	5.10	5.08	5.07	5.05	5.01	4.98	4.96
22.41	ELEV	79.19	79.19	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18
23.24	DISCHG	4.96	4.96	4.95	4.93	4.91	4.90	4.91	4.91	4.91	4.90
23.24	ELEV	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18
24.07	DISCHG	4.84	4.68	4.39	4.06	3.76	3.51	3.29	3.08	2.87	2.67
24.07	ELEV	79.17	79.17	79.16	79.15	79.13	79.13	79.12	79.11	79.10	79.10

RUNOFF VOLUME ABOVE BASEFLOW = 1.95 WATERSHED INCHES, 550.86 CFS-HRS, 45.52 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	183.49	85.37
19.97	9.63	79.35
23.86	4.91	79.18

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.05	1.13	8.21
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.04	79.29
5.81	DISCHG	27.69	63.00	107.71	142.84	154.07	160.13	168.30	180.46	183.49	180.88
5.81	ELEV	79.99	81.26	82.86	84.11	84.45	84.64	84.90	85.27	85.37	85.29
6.64	DISCHG	175.76	168.77	159.80	149.37	137.09	114.19	111.98	100.41	95.98	89.06
6.64	ELEV	85.13	84.91	84.63	84.31	83.92	83.10	83.02	82.60	82.44	82.19
7.47	DISCHG	84.66	79.70	75.64	71.54	67.89	64.39	61.21	58.19	55.13	51.79
7.47	ELEV	82.04	81.86	81.71	81.57	81.43	81.31	81.19	81.09	80.98	80.86
8.30	DISCHG	48.41	45.69	43.80	42.44	41.46	40.71	40.14	39.69	39.32	39.01
8.30	ELEV	80.74	80.64	80.57	80.52	80.49	80.46	80.44	80.42	80.41	80.40
9.13	DISCHG	38.74	38.49	38.27	38.06	37.87	37.68	37.49	37.31	37.14	36.96
9.13	ELEV	80.39	80.38	80.37	80.37	80.36	80.35	80.34	80.34	80.33	80.33
9.96	DISCHG	36.79	36.61	36.36	36.01	35.59	35.20	34.86	34.59	34.35	34.15
9.96	ELEV	80.32	80.31	80.30	80.29	80.28	80.26	80.25	80.24	80.23	80.22
10.79	DISCHG	33.97	33.79	33.61	33.42	33.23	33.06	32.90	32.74	32.57	32.38
10.79	ELEV	80.22	80.21	80.21	80.20	80.19	80.19	80.18	80.17	80.17	80.16

11.62	DISCHG	32.21	32.05	31.90	31.74	31.57	31.40	31.23	31.08	30.76	30.00
11.62	ELEV	80.16	80.15	80.14	80.14	80.13	80.13	80.12	80.11	80.10	80.08
12.45	DISCHG	28.92	27.69	26.42	25.18	24.00	22.90	21.87	20.93	20.06	19.26
12.45	ELEV	80.04	79.99	79.95	79.90	79.86	79.82	79.78	79.75	79.72	79.69
13.28	DISCHG	18.52	17.84	17.24	16.71	16.24	15.83	15.47	15.14	14.84	14.56
13.28	ELEV	79.66	79.64	79.62	79.60	79.58	79.57	79.55	79.54	79.53	79.52
14.11	DISCHG	14.28	14.02	13.77	13.53	13.32	13.13	12.96	12.81	12.67	12.54
14.11	ELEV	79.51	79.50	79.49	79.49	79.48	79.47	79.46	79.46	79.45	79.45
14.94	DISCHG	12.42	12.31	12.19	12.03	11.83	11.63	11.46	11.30	11.17	11.04
14.94	ELEV	79.45	79.44	79.44	79.43	79.42	79.42	79.41	79.41	79.40	79.40
15.77	DISCHG	10.92	10.80	10.70	10.59	10.50	10.41	10.32	10.25	10.18	10.11

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15.77	ELEV	79.39	79.39	79.38	79.38	79.38	79.37	79.37	79.37	79.36	79.36
16.60	DISCHG	10.05	10.00	9.95	9.90	9.86	9.83	9.79	9.77	9.74	9.72
16.60	ELEV	79.36	79.36	79.36	79.36	79.35	79.35	79.35	79.35	79.35	79.35
17.43	DISCHG	9.70	9.68	9.67	9.66	9.64	9.63	9.63	9.62	9.62	9.61
17.43	ELEV	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.34	79.34
18.26	DISCHG	9.61	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
18.26	ELEV	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34
19.09	DISCHG	9.60	9.60	9.61	9.61	9.61	9.61	9.61	9.62	9.62	9.62
19.09	ELEV	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.34	79.35
19.92	DISCHG	9.62	9.63	9.59	9.44	9.17	8.85	8.56	8.31	8.07	7.86
19.92	ELEV	79.35	79.35	79.34	79.34	79.33	79.32	79.31	79.30	79.29	79.28
20.75	DISCHG	7.68	7.49	7.30	7.11	6.91	6.74	6.58	6.44	6.30	6.15
20.75	ELEV	79.28	79.27	79.26	79.25	79.25	79.24	79.24	79.23	79.23	79.22
21.58	DISCHG	6.01	5.89	5.79	5.71	5.62	5.53	5.45	5.38	5.33	5.29
21.58	ELEV	79.22	79.21	79.21	79.20	79.20	79.20	79.20	79.19	79.19	79.19
22.41	DISCHG	5.25	5.19	5.14	5.10	5.08	5.07	5.05	5.02	4.99	4.97
22.41	ELEV	79.19	79.19	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18
23.24	DISCHG	4.96	4.96	4.96	4.94	4.94	4.91	4.90	4.91	4.91	4.90
23.24	ELEV	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18
24.07	DISCHG	4.85	4.71	4.44	4.11	3.80	3.55	3.32	3.11	2.90	2.70
24.07	ELEV	79.17	79.17	79.16	79.15	79.14	79.13	79.12	79.11	79.10	79.10

RUNOFF VOLUME ABOVE BASEFLOW = 1.95 WATERSHED INCHES, 550.97 CFS-HRS, 45.53 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	219.51	(NULL)
6.37	98.75	(NULL)
12.76	5.58	(NULL)
19.92	3.78	(NULL)
23.76	1.94	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 241.32 CFS-HRS, 19.94 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.62	180.36	(NULL)
20.05	9.63	(NULL)
23.95	4.91	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.95 WATERSHED INCHES, 550.92 CFS-HRS, 45.53 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	299.93	(NULL)
6.50	269.32	(NULL)
19.96	13.43	(NULL)
23.73	6.85	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.07 WATERSHED INCHES, 792.24 CFS-HRS, 65.47 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.96	239.32	(RUNOFF)
6.44	22.46	(RUNOFF)
6.93	13.66	(RUNOFF)
7.93	9.32	(RUNOFF)
9.92	4.68	(RUNOFF)
19.89	2.42	(RUNOFF)
23.71	1.27	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.37 WATERSHED INCHES, 153.26 CFS-HRS, 12.67 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	488.80	44.09
6.49	291.00	42.71
19.93	15.82	35.18
23.71	8.12	34.70

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	5.52	83.18	198.08
4.98	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.48	37.35	39.89
5.81	DISCHG	302.67	394.01	482.57	466.28	314.71	269.70	271.78	282.50	290.85	286.44
5.81	ELEV	42.82	43.67	44.08	44.06	42.93	42.19	42.28	42.63	42.71	42.67
6.64	DISCHG	270.85	256.99	243.63	229.61	214.78	197.22	170.83	157.28	143.74	134.58
6.64	ELEV	42.24	41.73	41.30	40.84	40.37	39.87	39.33	39.05	38.77	38.58
7.47	DISCHG	125.74	118.68	112.17	106.57	101.42	96.81	92.59	87.25	79.22	73.93
7.47	ELEV	38.40	38.26	38.12	38.01	37.86	37.73	37.61	37.47	37.24	37.09
8.30	DISCHG	69.83	66.01	62.56	59.74	57.54	55.86	54.57	53.58	52.80	52.18
8.30	ELEV	36.98	36.87	36.77	36.69	36.63	36.58	36.55	36.52	36.50	36.48
9.13	DISCHG	51.67	51.26	50.90	50.60	50.32	50.08	49.86	49.65	49.45	49.26
9.13	ELEV	36.47	36.45	36.44	36.44	36.43	36.42	36.42	36.41	36.40	36.40
9.96	DISCHG	49.07	48.64	47.32	46.59	46.09	45.54	45.03	44.59	44.28	43.98
9.96	ELEV	36.39	36.38	36.34	36.32	36.31	36.29	36.28	36.27	36.26	36.25
10.79	DISCHG	43.67	43.33	43.05	42.84	42.71	42.55	42.35	42.08	41.86	41.69
10.79	ELEV	36.24	36.23	36.22	36.22	36.21	36.21	36.20	36.20	36.19	36.19

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11.62	DISCHG	41.60	41.46	41.29	41.04	40.84	40.68	40.61	40.48	40.32	39.98
11.62	ELEV	36.18	36.18	36.17	36.17	36.16	36.16	36.16	36.15	36.15	36.14
12.45	DISCHG	39.38	38.51	37.52	36.37	35.15	33.87	32.68	31.56	30.17	29.06
12.45	ELEV	36.12	36.10	36.07	36.04	36.00	35.95	35.90	35.85	35.79	35.74
13.28	DISCHG	28.13	27.22	26.42	25.74	25.21	24.71	24.24	23.73	23.31	22.94
13.28	ELEV	35.71	35.67	35.63	35.60	35.58	35.56	35.54	35.52	35.50	35.48
14.11	DISCHG	22.43	22.04	21.72	21.44	21.17	20.92	20.70	20.50	20.32	20.16
14.11	ELEV	35.46	35.45	35.43	35.42	35.41	35.40	35.39	35.38	35.37	35.37
14.94	DISCHG	20.01	19.85	19.25	18.86	18.61	18.39	18.17	17.95	17.74	17.56
14.94	ELEV	35.36	35.35	35.33	35.31	35.30	35.29	35.28	35.27	35.26	35.26
15.77	DISCHG	17.39	17.24	17.10	16.98	16.86	16.75	16.65	16.55	16.47	16.39
15.77	ELEV	35.25	35.24	35.24	35.23	35.23	35.22	35.22	35.21	35.21	35.21
16.60	DISCHG	16.32	16.25	16.19	16.14	16.09	16.05	16.01	15.98	15.95	15.92
16.60	ELEV	35.20	35.20	35.20	35.19	35.19	35.19	35.19	35.19	35.19	35.19
17.43	DISCHG	15.90	15.88	15.86	15.85	15.83	15.82	15.81	15.80	15.80	15.79
17.43	ELEV	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18
18.26	DISCHG	15.79	15.79	15.78	15.78	15.78	15.78	15.78	15.78	15.79	15.79
18.26	ELEV	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18
19.09	DISCHG	15.79	15.79	15.79	15.80	15.80	15.81	15.81	15.81	15.82	15.82
19.09	ELEV	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18	35.18
19.92	DISCHG	15.82	15.82	14.88	14.02	13.62	13.23	12.81	12.40	12.11	11.84
19.92	ELEV	35.18	35.18	35.14	35.10	35.09	35.07	35.05	35.04	35.02	35.01
20.75	DISCHG	11.55	11.21	10.89	10.64	10.47	10.32	10.14	9.89	9.65	9.47
20.75	ELEV	35.00	34.97	34.94	34.92	34.91	34.89	34.88	34.86	34.83	34.82
21.58	DISCHG	9.38	9.30	9.19	9.01	8.84	8.73	8.70	8.68	8.63	8.50
21.58	ELEV	34.81	34.80	34.80	34.78	34.76	34.75	34.75	34.75	34.75	34.74
22.41	DISCHG	8.38	8.31	8.32	8.35	8.33	8.24	8.14	8.10	8.13	8.18
22.41	ELEV	34.72	34.72	34.72	34.72	34.72	34.71	34.70	34.70	34.70	34.71
23.24	DISCHG	8.18	8.11	8.03	8.00	8.04	8.10	8.11	8.05	7.98	7.95
23.24	ELEV	34.71	34.70	34.69	34.69	34.70	34.70	34.70	34.70	34.69	34.69

24.07	DISCHG	7.24	6.21	5.73	5.39	5.03	4.64	4.26	3.92	3.62	3.33
24.07	ELEV	34.63	34.54	34.50	34.47	34.43	34.40	34.37	34.34	34.31	34.29

RUNOFF VOLUME ABOVE BASEFLOW = 2.11 WATERSHED INCHES, 945.50 CFS-HRS, 78.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	488.80	(NULL)
6.49	291.00	(NULL)
19.93	15.82	(NULL)
23.71	8.12	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	5.52	83.18	198.08
5.81	DISCHG	302.67	394.01	482.57	466.28	314.71	269.70	271.78	282.50	290.85	286.44
6.64	DISCHG	270.85	256.99	243.63	229.61	214.78	197.22	170.83	157.28	143.74	134.58
7.47	DISCHG	125.74	118.68	112.17	106.57	101.42	96.81	92.59	87.25	79.22	73.93

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8.30	DISCHG	69.83	66.01	62.56	59.74	57.54	55.86	54.57	53.58	52.80	52.18
9.13	DISCHG	51.67	51.26	50.90	50.60	50.32	50.08	49.86	49.65	49.45	49.26
9.96	DISCHG	49.07	48.64	47.32	46.59	46.09	45.54	45.03	44.59	44.28	43.98
10.79	DISCHG	43.67	43.33	43.05	42.84	42.71	42.55	42.35	42.08	41.86	41.69
11.62	DISCHG	41.60	41.46	41.29	41.04	40.84	40.68	40.61	40.48	40.32	39.98
12.45	DISCHG	39.38	38.51	37.52	36.37	35.15	33.87	32.68	31.56	30.17	29.06
13.28	DISCHG	28.13	27.22	26.42	25.74	25.21	24.71	24.24	23.73	23.31	22.94
14.11	DISCHG	22.43	22.04	21.72	21.44	21.17	20.92	20.70	20.50	20.32	20.16
14.94	DISCHG	20.01	19.85	19.25	18.86	18.61	18.39	18.17	17.95	17.74	17.56
15.77	DISCHG	17.39	17.24	17.10	16.98	16.86	16.75	16.65	16.55	16.47	16.39
16.60	DISCHG	16.32	16.25	16.19	16.14	16.09	16.05	16.01	15.98	15.95	15.92
17.43	DISCHG	15.90	15.88	15.86	15.85	15.83	15.82	15.81	15.80	15.80	15.79
18.26	DISCHG	15.79	15.79	15.78	15.78	15.78	15.78	15.78	15.78	15.79	15.79
19.09	DISCHG	15.79	15.79	15.79	15.80	15.80	15.81	15.81	15.81	15.82	15.82
19.92	DISCHG	15.82	15.82	14.88	14.02	13.62	13.23	12.81	12.40	12.11	11.84
20.75	DISCHG	11.55	11.21	10.89	10.64	10.47	10.32	10.14	9.89	9.65	9.47
21.58	DISCHG	9.38	9.30	9.19	9.01	8.84	8.73	8.70	8.68	8.63	8.50
22.41	DISCHG	8.38	8.31	8.32	8.35	8.33	8.24	8.14	8.10	8.13	8.18
23.24	DISCHG	8.18	8.11	8.03	8.00	8.04	8.10	8.11	8.05	7.98	7.95
24.07	DISCHG	7.24	6.21	5.73	5.39	5.03	4.64	4.26	3.92	3.62	3.33

RUNOFF VOLUME ABOVE BASEFLOW = 2.11 WATERSHED INCHES, 945.50 CFS-HRS, 78.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	392.18	(NULL)
20.04	15.86	(NULL)
23.83	8.09	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.11 WATERSHED INCHES, 943.74 CFS-HRS, 77.99 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	111.41	(RUNOFF)
7.93	5.16	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.75 WATERSHED INCHES, 76.80 CFS-HRS, 6.35 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	126.61	(RUNOFF)
7.93	5.37	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 2.22 WATERSHED INCHES, 87.22 CFS-HRS, 7.21 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	466.34	(NULL)
19.96	17.24	(NULL)
23.80	8.82	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.08 WATERSHED INCHES, 1020.55 CFS-HRS, 84.34 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	579.57	(NULL)
19.96	18.69	(NULL)
23.79	9.56	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.09 WATERSHED INCHES, 1107.77 CFS-HRS, 91.55 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	514.60	(NULL)
20.05	18.67	(NULL)
23.90	9.54	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.08 WATERSHED INCHES, 1106.71 CFS-HRS, 91.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	179.45	(RUNOFF)
7.93	8.75	(RUNOFF)
9.93	4.47	(RUNOFF)
19.89	2.34	(RUNOFF)
23.82	1.21	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.13 WATERSHED INCHES, 140.04 CFS-HRS, 11.57 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	255.55	(RUNOFF)
9.93	7.39	(RUNOFF)
13.85	4.96	(RUNOFF)
19.93	3.88	(RUNOFF)
23.87	1.98	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.13 WATERSHED INCHES, 232.01 CFS-HRS, 19.17 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	427.32	73.42
7.93	23.26	70.25
9.93	11.86	70.13
12.85	9.11	70.10
14.90	7.34	70.08
19.90	6.23	70.07
23.84	3.18	70.03

RUNOFF VOLUME ABOVE BASEFLOW = 2.13 WATERSHED INCHES, 372.05 CFS-HRS, 30.75 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.58	83.44	70.91

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

4.98	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.02
5.81	ELEV	70.06	70.14	70.27	70.43	70.60	70.74	70.83	70.88	70.90	70.91
6.64	ELEV	70.90	70.90	70.88	70.87	70.85	70.83	70.81	70.79	70.77	70.75
7.47	ELEV	70.73	70.71	70.70	70.68	70.66	70.64	70.63	70.61	70.60	70.58
8.30	ELEV	70.56	70.55	70.53	70.52	70.50	70.48	70.47	70.46	70.44	70.43
9.13	ELEV	70.42	70.40	70.39	70.38	70.37	70.36	70.35	70.34	70.33	70.33
9.96	ELEV	70.32	70.31	70.30	70.29	70.29	70.28	70.27	70.27	70.26	70.25
10.79	ELEV	70.25	70.24	70.23	70.23	70.22	70.22	70.21	70.21	70.20	70.20
11.62	ELEV	70.19	70.19	70.19	70.18	70.18	70.18	70.17	70.17	70.17	70.16

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12.45	ELEV	70.16	70.16	70.16	70.15	70.15	70.15	70.15	70.15	70.14	70.14
13.28	ELEV	70.14	70.14	70.14	70.13	70.13	70.13	70.13	70.13	70.12	70.12
14.11	ELEV	70.12	70.12	70.12	70.12	70.12	70.11	70.11	70.11	70.11	70.11
14.94	ELEV	70.11	70.11	70.11	70.10	70.10	70.10	70.10	70.10	70.10	70.10
15.77	ELEV	70.10	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.09
16.60	ELEV	70.09	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08
17.43	ELEV	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08
18.26	ELEV	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07
19.09	ELEV	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07
19.92	ELEV	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.06
20.75	ELEV	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.05	70.05
21.58	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
22.41	ELEV	70.05	70.05	70.05	70.04	70.04	70.04	70.04	70.04	70.04	70.04
23.24	ELEV	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04
24.07	ELEV	70.04	70.04	70.04	70.04	70.04	70.03	70.03	70.03	70.03	70.03

RUNOFF VOLUME ABOVE BASEFLOW = 2.10 WATERSHED INCHES, 366.68 CFS-HRS, 30.30 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.97	91.81	(RUNOFF)
7.93	3.49	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.92 WATERSHED INCHES, 64.03 CFS-HRS, 5.29 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	124.76	(NULL)
6.52	91.61	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.19 WATERSHED INCHES, 430.71 CFS-HRS, 35.59 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	88.24	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.18 WATERSHED INCHES, 429.34 CFS-HRS, 35.48 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	294.47	(RUNOFF)
9.93	7.67	(RUNOFF)
13.85	5.11	(RUNOFF)
19.91	3.97	(RUNOFF)
23.87	2.02	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.55 WATERSHED INCHES, 261.16 CFS-HRS, 21.58 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	372.37	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.31 WATERSHED INCHES, 690.50 CFS-HRS, 57.06 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	868.56	(NULL)
23.85	15.78	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.16 WATERSHED INCHES, 1797.21 CFS-HRS, 148.52 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	852.11	(NULL)
23.94	15.77	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.16 WATERSHED INCHES, 1796.77 CFS-HRS, 148.49 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	214.83	(RUNOFF)
9.93	5.60	(RUNOFF)
19.91	2.89	(RUNOFF)
23.87	1.47	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.55 WATERSHED INCHES, 190.53 CFS-HRS, 15.75 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	1019.70	(NULL)
23.91	17.24	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.19 WATERSHED INCHES, 1987.30 CFS-HRS, 164.23 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 9 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	989.31	(NULL)
23.99	17.24	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.19 WATERSHED INCHES, 1986.10 CFS-HRS, 164.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	272.24	(RUNOFF)
9.93	7.10	(RUNOFF)
13.85	4.73	(RUNOFF)
19.91	3.67	(RUNOFF)
23.87	1.87	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.55 WATERSHED INCHES, 241.45 CFS-HRS, 19.95 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	1139.83	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	1.41	12.03	50.05
5.81	DISCHG	129.86	263.76	459.25	695.62	919.24	1073.82	1139.72	1084.31	948.01	801.97
6.64	DISCHG	687.01	607.38	555.34	518.82	490.85	468.01	448.08	429.04	409.70	388.97
7.47	DISCHG	366.23	343.85	322.97	304.36	287.99	273.72	261.25	250.21	239.81	229.32
8.30	DISCHG	218.41	206.51	194.16	182.67	172.70	164.16	156.77	150.32	144.67	139.74
9.13	DISCHG	135.46	131.75	128.54	125.75	123.31	121.16	119.24	117.50	115.93	114.48
9.96	DISCHG	113.14	111.86	110.53	108.98	107.20	105.04	102.60	100.22	98.10	96.26
10.79	DISCHG	94.66	93.27	92.02	90.87	89.76	88.72	87.75	86.89	86.10	85.34
11.62	DISCHG	84.59	83.85	83.16	82.54	81.96	81.39	80.81	80.23	79.68	79.18
12.45	DISCHG	78.73	78.27	77.80	77.30	76.77	76.16	75.42	74.50	73.36	71.98
13.28	DISCHG	70.42	68.70	66.87	65.07	63.38	61.86	60.50	59.32	58.29	57.34
14.11	DISCHG	56.42	55.50	54.59	53.69	52.80	51.98	51.25	50.61	50.05	49.55
14.94	DISCHG	49.09	48.67	48.24	47.74	47.14	46.40	45.53	44.66	43.90	43.27
15.77	DISCHG	42.74	42.28	41.86	41.49	41.14	40.82	40.53	40.25	40.00	39.76
16.60	DISCHG	39.53	39.32	39.13	38.94	38.77	38.61	38.46	38.31	38.18	38.06
17.43	DISCHG	37.95	37.84	37.74	37.65	37.57	37.49	37.42	37.35	37.29	37.23
18.26	DISCHG	37.18	37.13	37.08	37.04	37.00	36.96	36.93	36.90	36.87	36.84
19.09	DISCHG	36.81	36.79	36.77	36.75	36.73	36.72	36.70	36.69	36.68	36.66
19.92	DISCHG	36.65	36.64	36.56	36.26	35.64	34.66	33.22	31.64	30.22	29.06
20.75	DISCHG	28.14	27.40	26.80	26.26	25.75	25.24	24.77	24.35	24.00	23.67
21.58	DISCHG	23.33	22.98	22.64	22.35	22.11	21.89	21.66	21.41	21.16	20.96
22.41	DISCHG	20.81	20.67	20.52	20.35	20.18	20.05	19.96	19.89	19.80	19.68
23.24	DISCHG	19.56	19.47	19.43	19.40	19.34	19.26	19.17	19.11	19.09	19.08
24.07	DISCHG	19.00	18.67	18.01	17.00	15.56	13.95	12.50	11.32	10.38	9.61

RUNOFF VOLUME ABOVE BASEFLOW = 2.23 WATERSHED INCHES, 2227.54 CFS-HRS, 184.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	340.56	(RUNOFF)
7.93	13.97	(RUNOFF)
9.92	7.06	(RUNOFF)
19.90	3.62	(RUNOFF)
23.80	1.86	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.82 WATERSHED INCHES, 252.62 CFS-HRS, 20.88 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 20
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	269.60	(NULL)
10.10	7.05	(NULL)
13.92	4.68	(NULL)
20.13	3.61	(NULL)
24.02	1.83	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.81 WATERSHED INCHES, 252.45 CFS-HRS, 20.86 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	248.16	(RUNOFF)
7.93	10.35	(RUNOFF)
9.92	5.23	(RUNOFF)
19.88	2.68	(RUNOFF)
23.81	1.38	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.81 WATERSHED INCHES, 187.06 CFS-HRS, 15.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	422.48	(NULL)
9.93	12.27	(NULL)
12.86	9.31	(NULL)
19.90	6.29	(NULL)
23.84	3.17	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.81 WATERSHED INCHES, 439.51 CFS-HRS, 36.32 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	325.31	(NULL)
13.03	9.30	(NULL)
20.00	6.29	(NULL)
23.99	3.16	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.81 WATERSHED INCHES, 439.16 CFS-HRS, 36.29 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	173.63	(RUNOFF)
9.92	4.02	(RUNOFF)
19.90	2.05	(RUNOFF)
23.87	1.04	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.10 WATERSHED INCHES, 151.82 CFS-HRS, 12.55 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	158.34	(RUNOFF)

7.93	7.41	(RUNOFF)
23.82	1.01	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.37 WATERSHED INCHES, 124.08 CFS-HRS, 10.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	434.94	(NULL)
12.91	12.34	(NULL)
19.96	8.34	(NULL)
23.90	4.19	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.88 WATERSHED INCHES, 590.98 CFS-HRS, 48.84 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	414.96	(NULL)
13.03	15.20	(NULL)
20.05	10.29	(NULL)
24.00	5.17	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.77 WATERSHED INCHES, 714.30 CFS-HRS, 59.03 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.96	299.15	(RUNOFF)
6.44	28.07	(RUNOFF)
6.93	17.08	(RUNOFF)
7.93	11.65	(RUNOFF)
9.92	5.86	(RUNOFF)
19.89	3.03	(RUNOFF)
23.71	1.59	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.37 WATERSHED INCHES, 191.57 CFS-HRS, 15.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.01	421.46	(NULL)
6.46	442.81	(NULL)
12.71	19.66	(NULL)
19.91	13.31	(NULL)
23.70	6.74	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.03	.10	5.71	79.25	167.81
5.81	DISCHG	247.04	327.52	415.04	400.08	322.82	370.88	414.59	437.24	442.57	431.64
6.64	DISCHG	408.65	383.82	354.79	323.36	291.56	259.21	227.54	201.19	177.81	157.12
7.47	DISCHG	139.11	123.63	110.49	99.43	90.21	82.57	76.30	69.61	61.90	57.71
8.30	DISCHG	54.18	50.82	47.65	44.72	42.03	39.60	37.42	35.49	33.81	32.37
9.13	DISCHG	31.15	30.12	29.27	28.58	28.01	27.55	27.19	26.90	26.67	26.49
9.96	DISCHG	26.35	25.98	24.95	24.66	24.39	23.98	23.58	23.18	22.82	22.41
10.79	DISCHG	21.99	21.55	21.21	20.93	20.75	20.54	20.34	20.11	19.98	19.89
11.62	DISCHG	19.89	19.84	19.77	19.66	19.62	19.61	19.67	19.67	19.65	19.57
12.45	DISCHG	19.56	19.57	19.65	19.66	19.65	19.58	19.57	19.53	19.18	19.09
13.28	DISCHG	19.00	18.81	18.65	18.51	18.42	18.27	18.11	17.88	17.74	17.61
14.11	DISCHG	17.32	17.17	17.05	16.93	16.80	16.68	16.57	16.46	16.36	16.27
14.94	DISCHG	16.20	16.10	15.60	15.42	15.31	15.16	14.99	14.81	14.62	14.44
15.77	DISCHG	14.27	14.11	13.97	13.84	13.73	13.64	13.56	13.49	13.44	13.39
16.60	DISCHG	13.36	13.33	13.31	13.29	13.28	13.27	13.26	13.26	13.26	13.25
17.43	DISCHG	13.25	13.25	13.25	13.25	13.26	13.26	13.26	13.26	13.26	13.26
18.26	DISCHG	13.27	13.27	13.27	13.27	13.28	13.28	13.28	13.28	13.29	13.29
19.09	DISCHG	13.29	13.29	13.29	13.30	13.30	13.30	13.30	13.31	13.31	13.31
19.92	DISCHG	13.31	13.31	12.38	11.90	11.72	11.39	11.01	10.61	10.26	9.86
20.75	DISCHG	9.45	8.99	8.59	8.27	8.05	7.84	7.63	7.39	7.21	7.09
21.58	DISCHG	7.06	7.02	6.96	6.84	6.77	6.73	6.77	6.79	6.78	6.70

22.41	DISCHG	6.66	6.65	6.71	6.74	6.74	6.68	6.63	6.63	6.69	6.73
23.24	DISCHG	6.73	6.68	6.63	6.63	6.69	6.73	6.74	6.68	6.63	6.63
24.07	DISCHG	5.92	5.24	5.04	4.78	4.43	4.03	3.61	3.18	2.76	2.37

RUNOFF VOLUME ABOVE BASEFLOW = 2.68 WATERSHED INCHES, 905.87 CFS-HRS, 74.86 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	1559.49	(NULL)
23.54	26.04	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 2.07 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.03	.10	7.12	91.29	217.87
5.81	DISCHG	376.90	591.29	874.28	1095.70	1242.06	1444.69	1554.30	1521.56	1390.58	1233.62
6.64	DISCHG	1095.65	991.20	910.12	842.17	782.41	727.22	675.63	630.23	587.50	546.09
7.47	DISCHG	505.34	467.48	433.46	403.80	378.20	356.29	337.55	319.83	301.70	287.03
8.30	DISCHG	272.59	257.33	241.81	227.39	214.73	203.76	194.19	185.81	178.48	172.11
9.13	DISCHG	166.61	161.87	157.81	154.32	151.32	148.71	146.42	144.40	142.60	140.98
9.96	DISCHG	139.50	137.84	135.47	133.64	131.58	129.02	126.18	123.40	120.92	118.67
10.79	DISCHG	116.66	114.82	113.23	111.80	110.51	109.26	108.09	107.00	106.08	105.24
11.62	DISCHG	104.48	103.69	102.94	102.19	101.58	101.00	100.48	99.90	99.33	98.75
12.45	DISCHG	98.28	97.84	97.45	96.96	96.42	95.74	94.99	94.04	92.55	91.07
13.28	DISCHG	89.42	87.51	85.52	83.57	81.80	80.13	78.61	77.21	76.02	74.94
14.11	DISCHG	73.74	72.67	71.64	70.62	69.61	68.66	67.82	67.07	66.41	65.82
14.94	DISCHG	65.29	64.77	63.84	63.16	62.44	61.56	60.51	59.46	58.52	57.71
15.77	DISCHG	57.01	56.39	55.83	55.33	54.87	54.46	54.08	53.74	53.43	53.15
16.60	DISCHG	52.89	52.66	52.44	52.24	52.05	51.88	51.72	51.57	51.44	51.31
17.43	DISCHG	51.20	51.09	51.00	50.91	50.82	50.75	50.68	50.61	50.55	50.49
18.26	DISCHG	50.44	50.39	50.35	50.31	50.27	50.24	50.21	50.18	50.15	50.13
19.09	DISCHG	50.11	50.09	50.07	50.05	50.03	50.02	50.01	49.99	49.98	49.98
19.92	DISCHG	49.97	49.95	48.94	48.16	47.36	46.05	44.23	42.25	40.48	38.92
20.75	DISCHG	37.58	36.39	35.39	34.53	33.80	33.08	32.40	31.74	31.21	30.76
21.58	DISCHG	30.40	30.00	29.60	29.20	28.88	28.63	28.43	28.20	27.94	27.66
22.41	DISCHG	27.47	27.32	27.23	27.09	26.92	26.72	26.59	26.52	26.49	26.41
23.24	DISCHG	26.29	26.15	26.06	26.03	26.03	25.99	25.90	25.79	25.73	25.72
24.07	DISCHG	24.92	23.91	23.04	21.78	20.00	17.98	16.11	14.50	13.15	11.98

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 3133.42 CFS-HRS, 258.95 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	504.79	(RUNOFF)
9.93	12.12	(RUNOFF)
12.90	9.17	(RUNOFF)
19.88	6.15	(RUNOFF)
23.90	3.10	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.27 WATERSHED INCHES, 473.09 CFS-HRS, 39.10 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	252.30	(RUNOFF)
9.94	8.78	(RUNOFF)
12.94	6.73	(RUNOFF)
19.90	4.60	(RUNOFF)
23.92	2.33	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.19 WATERSHED INCHES, 279.50 CFS-HRS, 23.10 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	200.03	(RUNOFF)
9.94	6.18	(RUNOFF)
12.92	4.73	(RUNOFF)
19.93	3.22	(RUNOFF)
23.91	1.63	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.31 WATERSHED INCHES, 201.01 CFS-HRS, 16.61 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.02	98.14	(RUNOFF)
7.93	3.92	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.81 WATERSHED INCHES, 70.84 CFS-HRS, 5.85 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID
+ FROM XSECTION 44
+ TO XSECTION 43
STARTING TIME = .00 RAIN DEPTH = 3.20 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .08 HOURS

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	69.48	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 71.44 CFS-HRS, 5.90 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.59	39.73	64.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 71.21 CFS-HRS, 5.89 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	65.05	(RUNOFF)
7.94	4.02	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 57.01 CFS-HRS, 4.71 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	68.85	(NULL)
6.51	52.23	(NULL)
12.85	3.63	(NULL)
19.93	2.54	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 128.22 CFS-HRS, 10.60 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	128.26	(RUNOFF)
7.93	6.57	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.07 WATERSHED INCHES, 92.81 CFS-HRS, 7.67 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	192.64	64.72
13.70	5.66	58.60
19.92	4.37	58.39
23.80	2.25	58.06

1

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 221.02 CFS-HRS, 18.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.20	33.67	63.67
19.97	4.36	58.39

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .32 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.06	.95
4.98	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.71	57.85
5.81	DISCHG	4.74	13.39	27.14	28.52	29.89	30.85	31.43	31.83	32.19	32.52
5.81	ELEV	58.45	59.82	62.04	62.38	62.72	62.96	63.11	63.21	63.30	63.38
6.64	DISCHG	32.83	33.08	33.27	33.43	33.54	33.62	33.67	33.67	33.65	33.59
6.64	ELEV	63.46	63.52	63.57	63.61	63.64	63.66	63.67	63.67	63.66	63.65
7.47	DISCHG	33.52	33.44	33.34	33.23	33.11	32.99	32.86	32.72	32.58	32.41
7.47	ELEV	63.63	63.61	63.58	63.56	63.53	63.50	63.46	63.43	63.39	63.35
8.30	DISCHG	32.24	32.05	31.86	31.67	31.48	31.28	31.08	30.88	30.68	30.48
8.30	ELEV	63.31	63.26	63.22	63.17	63.12	63.07	63.02	62.97	62.92	62.87
9.13	DISCHG	30.28	30.09	29.89	29.69	29.49	29.30	29.10	28.91	28.72	28.53
9.13	ELEV	62.82	62.77	62.72	62.67	62.62	62.57	62.53	62.48	62.43	62.38
9.96	DISCHG	28.34	28.15	27.97	27.78	27.59	27.40	27.21	27.02	24.51	22.13
9.96	ELEV	62.33	62.29	62.24	62.19	62.15	62.10	62.05	62.00	61.60	61.22
10.79	DISCHG	20.05	18.24	16.67	15.29	14.14	13.23	12.42	11.70	11.06	10.49
10.79	ELEV	60.89	60.60	60.35	60.13	59.94	59.80	59.67	59.56	59.45	59.36
11.62	DISCHG	9.99	9.55	9.16	8.82	8.52	8.24	8.00	7.79	7.61	7.45
11.62	ELEV	59.29	59.22	59.15	59.10	59.05	59.01	58.97	58.94	58.91	58.88
12.45	DISCHG	7.31	7.18	7.07	6.97	6.89	6.82	6.75	6.69	6.63	6.56
12.45	ELEV	58.86	58.84	58.82	58.81	58.79	58.78	58.77	58.76	58.75	58.74
13.28	DISCHG	6.48	6.41	6.33	6.26	6.19	6.12	6.07	6.02	5.97	5.92
13.28	ELEV	58.73	58.72	58.70	58.69	58.68	58.67	58.66	58.65	58.65	58.64
14.11	DISCHG	5.87	5.82	5.76	5.71	5.65	5.60	5.56	5.52	5.48	5.44
14.11	ELEV	58.63	58.62	58.61	58.61	58.60	58.59	58.58	58.58	58.57	58.56
14.94	DISCHG	5.41	5.38	5.34	5.29	5.23	5.16	5.10	5.03	4.97	4.92
14.94	ELEV	58.56	58.55	58.55	58.54	58.53	58.52	58.51	58.50	58.49	58.48
15.77	DISCHG	4.86	4.81	4.76	4.72	4.68	4.64	4.60	4.57	4.54	4.52
15.77	ELEV	58.47	58.46	58.46	58.45	58.44	58.44	58.43	58.43	58.42	58.42
16.60	DISCHG	4.49	4.47	4.45	4.44	4.42	4.41	4.40	4.39	4.38	4.37
16.60	ELEV	58.41	58.41	58.41	58.40	58.40	58.40	58.40	58.40	58.39	58.39
17.43	DISCHG	4.36	4.36	4.35	4.35	4.34	4.34	4.34	4.34	4.34	4.34
17.43	ELEV	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39
18.26	DISCHG	4.33	4.33	4.33	4.33	4.34	4.34	4.34	4.34	4.34	4.34
18.26	ELEV	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39
19.09	DISCHG	4.34	4.34	4.34	4.35	4.35	4.35	4.35	4.35	4.35	4.36
19.09	ELEV	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39
19.92	DISCHG	4.36	4.36	4.35	4.31	4.22	4.10	3.98	3.86	3.73	3.62
19.92	ELEV	58.39	58.39	58.39	58.38	58.37	58.35	58.33	58.31	58.29	58.27

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20.75	DISCHG	3.51	3.41	3.31	3.21	3.12	3.03	2.95	2.88	2.82	2.75
20.75	ELEV	58.26	58.24	58.22	58.21	58.19	58.18	58.17	58.16	58.15	58.14

21.58	DISCHG	2.69	2.64	2.60	2.56	2.52	2.49	2.45	2.42	2.40	2.38
21.58	ELEV	58.13	58.12	58.11	58.11	58.10	58.09	58.09	58.08	58.08	58.08
22.41	DISCHG	2.36	2.34	2.33	2.31	2.30	2.29	2.28	2.27	2.26	2.25
22.41	ELEV	58.07	58.07	58.07	58.07	58.06	58.06	58.06	58.06	58.06	58.06
23.24	DISCHG	2.25	2.25	2.25	2.24	2.23	2.23	2.23	2.23	2.23	2.23
23.24	ELEV	58.06	58.06	58.06	58.06	58.05	58.05	58.05	58.05	58.05	58.05
24.07	DISCHG	2.21	2.17	2.08	1.96	1.83	1.71	1.58	1.47	1.35	1.24
24.07	ELEV	58.05	58.04	58.03	58.01	57.99	57.97	57.95	57.93	57.91	57.90

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 220.01 CFS-HRS, 18.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	69.95	(RUNOFF)
7.94	3.62	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.37 WATERSHED INCHES, 55.87 CFS-HRS, 4.62 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.98	32.90	(NULL)
20.13	4.35	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 219.21 CFS-HRS, 18.12 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	36.76	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.37 WATERSHED INCHES, 55.70 CFS-HRS, 4.60 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	69.60	(RUNOFF)
7.94	5.12	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .93 WATERSHED INCHES, 69.51 CFS-HRS, 5.74 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	116.82	(RUNOFF)
7.93	5.26	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.34 WATERSHED INCHES, 80.41 CFS-HRS, 6.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	81.00	81.90
7.96	38.02	80.36
19.97	5.81	79.21
23.80	3.01	79.11

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.07	1.57
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.06
5.81	DISCHG	7.51	22.07	43.86	67.81	80.48	76.20	64.21	52.73	46.23	42.83
5.81	ELEV	79.27	79.79	80.57	81.43	81.89	81.73	81.30	80.89	80.66	80.54
6.64	DISCHG	40.92	39.48	38.54	38.05	38.01	38.14	38.18	38.00	37.78	37.68
6.64	ELEV	80.47	80.42	80.38	80.36	80.36	80.37	80.37	80.36	80.36	80.35
7.47	DISCHG	37.68	37.74	37.82	37.89	37.95	38.00	38.02	37.98	37.71	37.16
7.47	ELEV	80.35	80.35	80.36	80.36	80.36	80.36	80.36	80.36	80.35	80.33

8.30	DISCHG	36.51	35.96	35.57	35.29	35.05	34.86	34.67	34.49	34.32	34.14
8.30	ELEV	80.31	80.29	80.28	80.27	80.26	80.25	80.24	80.24	80.23	80.22
9.13	DISCHG	33.96	33.78	33.60	33.42	33.23	33.05	32.86	32.67	32.49	32.30
9.13	ELEV	80.22	80.21	80.21	80.20	80.19	80.19	80.18	80.17	80.17	80.16
9.96	DISCHG	32.11	31.91	31.67	31.36	31.03	30.72	30.44	30.20	29.98	29.38
9.96	ELEV	80.15	80.14	80.14	80.12	80.11	80.10	80.09	80.08	80.08	80.05
10.79	DISCHG	28.48	27.38	26.16	24.86	23.56	22.29	21.09	19.96	18.89	17.89
10.79	ELEV	80.02	79.98	79.94	79.89	79.85	79.80	79.76	79.72	79.68	79.64
11.62	DISCHG	16.96	16.12	15.35	14.65	14.00	13.40	12.86	12.39	11.96	11.57
11.62	ELEV	79.61	79.58	79.55	79.53	79.50	79.48	79.46	79.44	79.43	79.42
12.45	DISCHG	11.22	10.89	10.61	10.36	10.14	9.94	9.76	9.59	9.43	9.25
12.45	ELEV	79.40	79.39	79.38	79.37	79.36	79.36	79.35	79.34	79.34	79.33
13.28	DISCHG	9.08	8.92	8.78	8.65	8.54	8.44	8.36	8.29	8.21	8.13
13.28	ELEV	79.33	79.32	79.31	79.31	79.31	79.30	79.30	79.30	79.29	79.29
14.11	DISCHG	8.04	7.95	7.86	7.78	7.70	7.64	7.58	7.52	7.46	7.41
14.11	ELEV	79.29	79.29	79.28	79.28	79.28	79.27	79.27	79.27	79.27	79.27
14.94	DISCHG	7.37	7.32	7.26	7.17	7.07	6.96	6.88	6.80	6.73	6.67
14.94	ELEV	79.26	79.26	79.26	79.26	79.25	79.25	79.25	79.24	79.24	79.24
15.77	DISCHG	6.61	6.55	6.50	6.44	6.39	6.34	6.29	6.25	6.21	6.17
15.77	ELEV	79.24	79.23	79.23	79.23	79.23	79.23	79.23	79.22	79.22	79.22
16.60	DISCHG	6.13	6.09	6.06	6.03	6.00	5.98	5.96	5.93	5.92	5.90

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16.60	ELEV	79.22	79.22	79.22	79.22	79.22	79.21	79.21	79.21	79.21	79.21
17.43	DISCHG	5.88	5.87	5.86	5.85	5.84	5.83	5.82	5.81	5.81	5.81
17.43	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
18.26	DISCHG	5.80	5.80	5.80	5.79	5.79	5.79	5.79	5.79	5.79	5.79
18.26	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
19.09	DISCHG	5.79	5.79	5.79	5.80	5.80	5.80	5.80	5.80	5.80	5.81
19.09	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
19.92	DISCHG	5.81	5.81	5.78	5.68	5.52	5.35	5.19	5.06	4.95	4.85
19.92	ELEV	79.21	79.21	79.21	79.20	79.20	79.19	79.19	79.18	79.18	79.17
20.75	DISCHG	4.76	4.68	4.58	4.48	4.38	4.29	4.20	4.12	4.04	3.95
20.75	ELEV	79.17	79.17	79.16	79.16	79.16	79.15	79.15	79.15	79.14	79.14
21.58	DISCHG	3.86	3.78	3.72	3.66	3.60	3.53	3.47	3.42	3.38	3.35
21.58	ELEV	79.14	79.14	79.13	79.13	79.13	79.13	79.12	79.12	79.12	79.12
22.41	DISCHG	3.31	3.27	3.23	3.20	3.18	3.16	3.14	3.11	3.09	3.07
22.41	ELEV	79.12	79.12	79.12	79.11	79.11	79.11	79.11	79.11	79.11	79.11
23.24	DISCHG	3.06	3.06	3.05	3.03	3.01	3.00	3.00	3.01	3.00	2.99
23.24	ELEV	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11
24.07	DISCHG	2.96	2.86	2.69	2.50	2.34	2.21	2.10	1.99	1.89	1.79
24.07	ELEV	79.11	79.10	79.10	79.09	79.08	79.08	79.08	79.07	79.07	79.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.02 WATERSHED INCHES, 288.72 CFS-HRS, 23.86 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	80.86	81.90
7.97	38.02	80.36
19.97	5.81	79.21
23.81	3.01	79.11

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.06	1.25
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.04
5.81	DISCHG	6.37	19.46	40.45	64.37	79.57	77.65	66.07	54.25	46.83	43.26
5.81	ELEV	79.23	79.70	80.45	81.31	81.85	81.78	81.37	80.95	80.68	80.55
6.64	DISCHG	41.11	39.69	38.63	38.11	37.99	38.13	38.18	38.04	37.81	37.69
6.64	ELEV	80.47	80.42	80.39	80.37	80.36	80.37	80.37	80.36	80.36	80.35
7.47	DISCHG	37.67	37.73	37.81	37.88	37.95	37.99	38.02	37.99	37.77	37.25
7.47	ELEV	80.35	80.35	80.36	80.36	80.36	80.36	80.36	80.36	80.35	80.34
8.30	DISCHG	36.61	36.03	35.62	35.32	35.09	34.88	34.70	34.52	34.34	34.17
8.30	ELEV	80.31	80.29	80.28	80.27	80.26	80.25	80.24	80.24	80.23	80.23
9.13	DISCHG	33.99	33.81	33.63	33.44	33.26	33.07	32.89	32.70	32.51	32.32
9.13	ELEV	80.22	80.21	80.21	80.20	80.19	80.19	80.18	80.17	80.17	80.16
9.96	DISCHG	32.14	31.94	31.71	31.41	31.08	30.76	30.48	30.23	30.01	29.50
9.96	ELEV	80.15	80.15	80.14	80.13	80.11	80.10	80.09	80.08	80.08	80.06
10.79	DISCHG	28.62	27.55	26.33	25.05	23.75	22.47	21.26	20.12	19.04	18.03
10.79	ELEV	80.03	79.99	79.94	79.90	79.85	79.81	79.76	79.72	79.68	79.65
11.62	DISCHG	17.09	16.24	15.46	14.74	14.09	13.48	12.94	12.45	12.02	11.63

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11.62	ELEV	79.61	79.58	79.55	79.53	79.51	79.48	79.46	79.45	79.43	79.42
12.45	DISCHG	11.27	10.94	10.65	10.39	10.17	9.97	9.79	9.62	9.45	9.28
12.45	ELEV	79.40	79.39	79.38	79.37	79.36	79.36	79.35	79.34	79.34	79.33
13.28	DISCHG	9.11	8.95	8.80	8.67	8.55	8.46	8.38	8.30	8.22	8.14
13.28	ELEV	79.33	79.32	79.32	79.31	79.31	79.30	79.30	79.30	79.29	79.29
14.11	DISCHG	8.06	7.97	7.88	7.79	7.71	7.65	7.58	7.53	7.47	7.42
14.11	ELEV	79.29	79.29	79.28	79.28	79.28	79.27	79.27	79.27	79.27	79.27
14.94	DISCHG	7.37	7.33	7.27	7.18	7.08	6.98	6.89	6.81	6.74	6.68
14.94	ELEV	79.26	79.26	79.26	79.26	79.25	79.25	79.25	79.24	79.24	79.24
15.77	DISCHG	6.62	6.56	6.50	6.45	6.40	6.35	6.30	6.26	6.21	6.17
15.77	ELEV	79.24	79.24	79.23	79.23	79.23	79.23	79.23	79.22	79.22	79.22
16.60	DISCHG	6.13	6.10	6.07	6.04	6.01	5.98	5.96	5.94	5.92	5.90
16.60	ELEV	79.22	79.22	79.22	79.22	79.22	79.21	79.21	79.21	79.21	79.21
17.43	DISCHG	5.88	5.87	5.86	5.85	5.84	5.83	5.82	5.82	5.81	5.81
17.43	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
18.26	DISCHG	5.80	5.80	5.80	5.79	5.79	5.79	5.79	5.79	5.79	5.79
18.26	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
19.09	DISCHG	5.79	5.79	5.79	5.80	5.80	5.80	5.80	5.80	5.80	5.81
19.09	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
19.92	DISCHG	5.81	5.81	5.79	5.70	5.55	5.37	5.21	5.08	4.97	4.87
19.92	ELEV	79.21	79.21	79.21	79.20	79.20	79.19	79.19	79.18	79.18	79.17
20.75	DISCHG	4.78	4.69	4.60	4.49	4.39	4.30	4.21	4.13	4.05	3.96
20.75	ELEV	79.17	79.17	79.16	79.16	79.16	79.15	79.15	79.15	79.15	79.14
21.58	DISCHG	3.87	3.79	3.73	3.67	3.61	3.54	3.48	3.43	3.39	3.35
21.58	ELEV	79.14	79.14	79.13	79.13	79.13	79.13	79.12	79.12	79.12	79.12
22.41	DISCHG	3.32	3.27	3.23	3.20	3.18	3.16	3.14	3.12	3.09	3.07
22.41	ELEV	79.12	79.12	79.12	79.11	79.11	79.11	79.11	79.11	79.11	79.11
23.24	DISCHG	3.06	3.06	3.05	3.03	3.02	3.01	3.00	3.01	3.00	2.99
23.24	ELEV	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11
24.07	DISCHG	2.96	2.88	2.71	2.52	2.36	2.22	2.11	2.01	1.91	1.81
24.07	ELEV	79.11	79.10	79.10	79.09	79.08	79.08	79.08	79.07	79.07	79.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.02 WATERSHED INCHES, 288.71 CFS-HRS, 23.86 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	120.95	(NULL)
6.41	50.54	(NULL)
19.96	2.42	(NULL)
23.76	1.23	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.35 WATERSHED INCHES, 136.11 CFS-HRS, 11.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	71.13	(NULL)
8.10	38.00	(NULL)
20.06	5.81	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.02 WATERSHED INCHES, 288.37 CFS-HRS, 23.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	146.31	(NULL)
6.32	120.27	(NULL)
19.96	8.22	(NULL)
23.71	4.25	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.11 WATERSHED INCHES, 424.48 CFS-HRS, 35.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.96	136.48	(RUNOFF)
6.44	13.60	(RUNOFF)
6.93	8.35	(RUNOFF)
7.93	5.75	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.34 WATERSHED INCHES, 86.46 CFS-HRS, 7.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	259.06	41.79
6.31	133.50	38.56
19.96	9.74	34.84
23.71	5.06	34.44

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.05	18.59	77.43
4.98	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	35.30	37.19
5.81	DISCHG	142.75	201.34	255.39	244.91	154.51	132.29	133.50	132.19	124.54	112.45
5.81	ELEV	38.75	39.96	41.67	41.34	38.99	38.54	38.56	38.53	38.38	38.13
6.64	DISCHG	98.67	89.58	83.27	78.42	74.59	70.54	65.67	62.79	60.91	59.39
6.64	ELEV	37.79	37.53	37.35	37.22	37.11	37.00	36.86	36.78	36.73	36.68
7.47	DISCHG	58.10	57.03	56.19	55.53	55.01	54.60	54.27	53.07	50.03	48.52
7.47	ELEV	36.65	36.62	36.59	36.57	36.56	36.55	36.54	36.51	36.42	36.38
8.30	DISCHG	47.65	46.82	45.98	45.19	44.53	43.97	43.51	43.11	42.76	42.45

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8.30	ELEV	36.35	36.33	36.31	36.28	36.27	36.25	36.24	36.23	36.22	36.21
9.13	DISCHG	42.17	41.91	41.67	41.44	41.22	41.00	40.79	40.59	40.38	40.19
9.13	ELEV	36.20	36.19	36.19	36.18	36.17	36.17	36.16	36.16	36.15	36.14
9.96	DISCHG	39.99	39.64	38.73	38.20	37.82	37.42	37.04	36.70	36.43	36.16
9.96	ELEV	36.14	36.13	36.10	36.09	36.08	36.07	36.06	36.05	36.04	36.03
10.79	DISCHG	35.73	35.00	34.08	33.02	31.89	30.66	29.39	28.09	26.87	25.73
10.79	ELEV	36.02	36.00	35.96	35.91	35.87	35.81	35.76	35.70	35.65	35.60
11.62	DISCHG	24.72	23.74	22.82	21.91	21.10	20.39	19.79	19.22	18.68	18.14
11.62	ELEV	35.56	35.52	35.48	35.44	35.41	35.38	35.35	35.33	35.30	35.28
12.45	DISCHG	17.68	17.29	16.99	16.69	16.41	16.10	15.85	15.61	15.18	14.88
12.45	ELEV	35.26	35.24	35.23	35.22	35.21	35.19	35.18	35.17	35.15	35.14
13.28	DISCHG	14.66	14.41	14.19	14.02	13.91	13.79	13.67	13.50	13.38	13.27
13.28	ELEV	35.13	35.12	35.11	35.10	35.10	35.10	35.09	35.08	35.08	35.07
14.11	DISCHG	13.05	12.90	12.79	12.68	12.58	12.49	12.40	12.33	12.26	12.19
14.11	ELEV	35.06	35.06	35.05	35.05	35.04	35.04	35.04	35.03	35.03	35.03
14.94	DISCHG	12.13	12.06	11.70	11.48	11.34	11.23	11.12	11.00	10.89	10.80
14.94	ELEV	35.02	35.02	35.01	34.99	34.98	34.97	34.96	34.95	34.94	34.93
15.77	DISCHG	10.71	10.63	10.55	10.49	10.42	10.36	10.30	10.25	10.20	10.15
15.77	ELEV	34.93	34.92	34.91	34.91	34.90	34.90	34.89	34.89	34.88	34.88
16.60	DISCHG	10.11	10.07	10.03	9.99	9.96	9.93	9.90	9.88	9.86	9.84
16.60	ELEV	34.87	34.87	34.87	34.86	34.86	34.86	34.86	34.85	34.85	34.85
17.43	DISCHG	9.82	9.80	9.79	9.77	9.76	9.75	9.74	9.74	9.73	9.72
17.43	ELEV	34.85	34.85	34.85	34.85	34.84	34.84	34.84	34.84	34.84	34.84
18.26	DISCHG	9.72	9.72	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71
18.26	ELEV	34.84	34.84	34.84	34.84	34.84	34.84	34.84	34.84	34.84	34.84
19.09	DISCHG	9.72	9.72	9.72	9.72	9.72	9.73	9.73	9.73	9.74	9.74
19.09	ELEV	34.84	34.84	34.84	34.84	34.84	34.84	34.84	34.84	34.84	34.84
19.92	DISCHG	9.74	9.74	9.14	8.60	8.36	8.14	7.90	7.68	7.53	7.39
19.92	ELEV	34.84	34.84	34.79	34.74	34.72	34.70	34.68	34.66	34.65	34.64
20.75	DISCHG	7.24	7.05	6.88	6.74	6.67	6.59	6.49	6.34	6.20	6.09
20.75	ELEV	34.63	34.61	34.60	34.58	34.58	34.57	34.56	34.55	34.54	34.53
21.58	DISCHG	6.04	5.99	5.92	5.80	5.69	5.61	5.58	5.56	5.52	5.43
21.58	ELEV	34.52	34.52	34.51	34.50	34.49	34.48	34.48	34.48	34.48	34.47
22.41	DISCHG	5.34	5.28	5.28	5.29	5.27	5.20	5.13	5.09	5.11	5.13
22.41	ELEV	34.46	34.46	34.46	34.46	34.46	34.45	34.44	34.44	34.44	34.44
23.24	DISCHG	5.13	5.08	5.02	4.99	5.01	5.05	5.05	5.01	4.96	4.94
23.24	ELEV	34.44	34.44	34.43	34.43	34.43	34.44	34.44	34.43	34.43	34.43
24.07	DISCHG	4.48	3.83	3.53	3.34	3.14	2.92	2.72	2.53	2.37	2.21
24.07	ELEV	34.39	34.33	34.31	34.29	34.27	34.25	34.24	34.22	34.20	34.19

RUNOFF VOLUME ABOVE BASEFLOW = 1.14 WATERSHED INCHES, 510.94 CFS-HRS, 42.22 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	259.06	(NULL)
6.31	133.50	(NULL)
19.96	9.74	(NULL)
23.71	5.06	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.05	18.59	77.43
5.81	DISCHG	142.75	201.34	255.39	244.91	154.51	132.29	133.50	132.19	124.54	112.45
6.64	DISCHG	98.67	89.58	83.27	78.42	74.59	70.54	65.67	62.79	60.91	59.39
7.47	DISCHG	58.10	57.03	56.19	55.53	55.01	54.60	54.27	53.07	50.03	48.52
8.30	DISCHG	47.65	46.82	45.98	45.19	44.53	43.97	43.51	43.11	42.76	42.45
9.13	DISCHG	42.17	41.91	41.67	41.44	41.22	41.00	40.79	40.59	40.38	40.19
9.96	DISCHG	39.99	39.64	38.73	38.20	37.82	37.42	37.04	36.70	36.43	36.16
10.79	DISCHG	35.73	35.00	34.08	33.02	31.89	30.66	29.39	28.09	26.87	25.73
11.62	DISCHG	24.72	23.74	22.82	21.91	21.10	20.39	19.79	19.22	18.68	18.14
12.45	DISCHG	17.68	17.29	16.99	16.69	16.41	16.10	15.85	15.61	15.18	14.88
13.28	DISCHG	14.66	14.41	14.19	14.02	13.91	13.79	13.67	13.50	13.38	13.27
14.11	DISCHG	13.05	12.90	12.79	12.68	12.58	12.49	12.40	12.33	12.26	12.19
14.94	DISCHG	12.13	12.06	11.70	11.48	11.34	11.23	11.12	11.00	10.89	10.80
15.77	DISCHG	10.71	10.63	10.55	10.49	10.42	10.36	10.30	10.25	10.20	10.15
16.60	DISCHG	10.11	10.07	10.03	9.99	9.96	9.93	9.90	9.88	9.86	9.84
17.43	DISCHG	9.82	9.80	9.79	9.77	9.76	9.75	9.74	9.74	9.73	9.72
18.26	DISCHG	9.72	9.72	9.71	9.71	9.71	9.71	9.71	9.71	9.71	9.71
19.09	DISCHG	9.72	9.72	9.72	9.72	9.72	9.73	9.73	9.73	9.74	9.74
19.92	DISCHG	9.74	9.74	9.14	8.60	8.36	8.14	7.90	7.68	7.53	7.39
20.75	DISCHG	7.24	7.05	6.88	6.74	6.67	6.59	6.49	6.34	6.20	6.09
21.58	DISCHG	6.04	5.99	5.92	5.80	5.69	5.61	5.58	5.56	5.52	5.43
22.41	DISCHG	5.34	5.28	5.28	5.29	5.27	5.20	5.13	5.09	5.11	5.13
23.24	DISCHG	5.13	5.08	5.02	4.99	5.01	5.05	5.05	5.01	4.96	4.94
24.07	DISCHG	4.48	3.83	3.53	3.34	3.14	2.92	2.72	2.53	2.37	2.21

RUNOFF VOLUME ABOVE BASEFLOW = 1.14 WATERSHED INCHES, 510.94 CFS-HRS, 42.22 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	190.26	(NULL)
20.13	9.76	(NULL)
23.88	5.04	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.14 WATERSHED INCHES, 509.57 CFS-HRS, 42.11 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	54.61	(RUNOFF)
7.94	2.90	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .88 WATERSHED INCHES, 38.61 CFS-HRS, 3.19 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	69.29	(RUNOFF)
7.93	3.24	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.21 WATERSHED INCHES, 47.81 CFS-HRS, 3.95 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	206.62	(NULL)
19.96	10.57	(NULL)
23.79	5.47	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.11 WATERSHED INCHES, 548.18 CFS-HRS, 45.30 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	239.38	(NULL)
19.96	11.47	(NULL)
23.78	5.94	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.12 WATERSHED INCHES, 595.98 CFS-HRS, 49.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	214.38	(NULL)
20.05	11.46	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.12 WATERSHED INCHES, 594.96 CFS-HRS, 49.17 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	94.05	(RUNOFF)
7.94	5.22	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.15 WATERSHED INCHES, 75.76 CFS-HRS, 6.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	131.84	(RUNOFF)
7.93	8.65	(RUNOFF)
9.94	4.46	(RUNOFF)
19.95	2.40	(RUNOFF)
23.87	1.23	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.15 WATERSHED INCHES, 125.49 CFS-HRS, 10.37 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	220.87	71.95
7.93	13.86	70.15
9.94	7.15	70.08
19.92	3.85	70.04
23.84	1.97	70.02

RUNOFF VOLUME ABOVE BASEFLOW = 1.15 WATERSHED INCHES, 201.25 CFS-HRS, 16.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.63	41.62	70.45

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

4.98	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
5.81	ELEV	70.02	70.05	70.11	70.19	70.27	70.35	70.40	70.43	70.44	70.45
6.64	ELEV	70.45	70.45	70.45	70.44	70.43	70.42	70.42	70.41	70.40	70.39

7.47	ELEV	70.38	70.37	70.36	70.35	70.34	70.34	70.33	70.32	70.31	70.31
8.30	ELEV	70.30	70.29	70.28	70.27	70.27	70.26	70.25	70.24	70.24	70.23

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9.13	ELEV	70.22	70.22	70.21	70.21	70.20	70.20	70.19	70.19	70.18	70.18
9.96	ELEV	70.17	70.17	70.17	70.16	70.16	70.15	70.15	70.15	70.14	70.14
10.79	ELEV	70.14	70.13	70.13	70.13	70.12	70.12	70.12	70.12	70.11	70.11
11.62	ELEV	70.11	70.11	70.11	70.10	70.10	70.10	70.10	70.10	70.10	70.09
12.45	ELEV	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.08	70.08	70.08
13.28	ELEV	70.08	70.08	70.08	70.08	70.08	70.08	70.07	70.07	70.07	70.07
14.11	ELEV	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.06
14.94	ELEV	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06
15.77	ELEV	70.06	70.06	70.06	70.06	70.05	70.05	70.05	70.05	70.05	70.05
16.60	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
17.43	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
18.26	ELEV	70.05	70.05	70.05	70.05	70.05	70.04	70.04	70.04	70.04	70.04
19.09	ELEV	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04
19.92	ELEV	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04
20.75	ELEV	70.04	70.04	70.04	70.04	70.04	70.04	70.03	70.03	70.03	70.03
21.58	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03
22.41	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03
23.24	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.02	70.02	70.02	70.02
24.07	ELEV	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02

RUNOFF VOLUME ABOVE BASEFLOW = 1.13 WATERSHED INCHES, 197.93 CFS-HRS, 16.36 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.99	56.34	(RUNOFF)
7.93	2.28	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.76 WATERSHED INCHES, 38.73 CFS-HRS, 3.20 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	70.92	(NULL)
6.53	46.71	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 236.66 CFS-HRS, 19.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.79	44.74	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 235.65 CFS-HRS, 19.47 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	165.08	(RUNOFF)
9.93	4.86	(RUNOFF)
19.93	2.56	(RUNOFF)
23.87	1.30	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.47 WATERSHED INCHES, 150.56 CFS-HRS, 12.44 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	205.44	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.29 WATERSHED INCHES, 386.21 CFS-HRS, 31.92 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	386.72	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 981.17 CFS-HRS, 81.08 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	379.56	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 980.82 CFS-HRS, 81.05 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	120.44	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.47 WATERSHED INCHES, 109.84 CFS-HRS, 9.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	464.61	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 1090.66 CFS-HRS, 90.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.40	443.50	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 1089.73 CFS-HRS, 90.06 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	152.62	(RUNOFF)
9.93	4.49	(RUNOFF)
19.93	2.37	(RUNOFF)

23.87 1.21 (RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.47 WATERSHED INCHES, 139.20 CFS-HRS, 11.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	519.64	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.17	2.73	15.76

1

5.81	DISCHG	48.06	107.35	194.12	299.79	403.06	478.32	516.94	509.80	474.06	425.57
6.64	DISCHG	378.39	338.49	307.02	281.67	260.75	242.77	226.80	212.23	198.87	186.57
7.47	DISCHG	175.45	165.70	157.35	150.34	144.50	139.65	135.61	132.16	128.83	125.25
8.30	DISCHG	121.31	116.93	112.47	108.22	104.42	101.12	98.27	95.79	93.60	91.64
9.13	DISCHG	89.85	88.23	86.76	85.41	84.17	83.04	82.00	81.03	80.13	79.28
9.96	DISCHG	78.48	77.71	76.89	75.94	74.85	73.60	72.27	70.94	69.68	68.55
10.79	DISCHG	67.53	66.61	65.77	64.98	64.22	63.51	62.79	62.04	61.21	60.26
11.62	DISCHG	59.20	58.04	56.80	55.51	54.19	52.85	51.52	50.22	48.98	47.80
12.45	DISCHG	46.68	45.62	44.62	43.69	42.83	42.05	41.32	40.65	39.99	39.31
13.28	DISCHG	38.62	37.91	37.19	36.49	35.85	35.27	34.77	34.34	33.95	33.59
14.11	DISCHG	33.24	32.88	32.50	32.12	31.74	31.38	31.05	30.76	30.49	30.25
14.94	DISCHG	30.04	29.83	29.62	29.35	29.02	28.62	28.19	27.75	27.34	26.98
15.77	DISCHG	26.66	26.38	26.13	25.90	25.70	25.50	25.33	25.16	25.00	24.86
16.60	DISCHG	24.72	24.59	24.47	24.36	24.25	24.15	24.06	23.97	23.88	23.80
17.43	DISCHG	23.72	23.65	23.59	23.52	23.47	23.41	23.36	23.32	23.27	23.23
18.26	DISCHG	23.19	23.16	23.13	23.10	23.07	23.04	23.02	23.00	22.98	22.97
19.09	DISCHG	22.95	22.94	22.92	22.91	22.90	22.89	22.89	22.88	22.87	22.87
19.92	DISCHG	22.86	22.86	22.80	22.62	22.24	21.67	20.94	20.14	19.37	18.69
20.75	DISCHG	18.12	17.65	17.25	16.89	16.56	16.25	15.96	15.71	15.48	15.26
21.58	DISCHG	15.05	14.84	14.65	14.47	14.31	14.15	13.99	13.84	13.69	13.56
22.41	DISCHG	13.44	13.32	13.20	13.08	12.97	12.88	12.80	12.72	12.64	12.55
23.24	DISCHG	12.48	12.42	12.37	12.31	12.26	12.20	12.15	12.11	12.08	12.05
24.07	DISCHG	11.98	11.77	11.36	10.77	10.01	9.19	8.40	7.70	7.10	6.60

RUNOFF VOLUME ABOVE BASEFLOW = 1.23 WATERSHED INCHES, 1228.93 CFS-HRS, 101.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	203.38	(RUNOFF)
7.93	9.03	(RUNOFF)
9.93	4.59	(RUNOFF)
19.91	2.39	(RUNOFF)
23.80	1.23	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 150.90 CFS-HRS, 12.47 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	149.95	(NULL)
10.11	4.58	(NULL)
13.03	3.50	(NULL)
20.13	2.39	(NULL)
24.02	1.21	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 150.76 CFS-HRS, 12.46 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.05	147.77	(RUNOFF)
7.93	6.69	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 111.72 CFS-HRS, 9.23 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	235.16	(NULL)
9.94	7.98	(NULL)
12.86	6.09	(NULL)
19.89	4.15	(NULL)
23.84	2.10	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 262.49 CFS-HRS, 21.69 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	172.11	(NULL)
13.13	6.08	(NULL)
20.13	4.15	(NULL)
24.07	2.09	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 262.13 CFS-HRS, 21.66 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	106.41	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.91 WATERSHED INCHES, 93.81 CFS-HRS, 7.75 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	87.10	(RUNOFF)
7.94	4.57	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.34 WATERSHED INCHES, 69.80 CFS-HRS, 5.77 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	211.55	(NULL)
12.92	8.11	(NULL)
19.96	5.53	(NULL)
23.90	2.78	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.73 WATERSHED INCHES, 355.94 CFS-HRS, 29.42 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.63	200.14	(NULL)
13.01	9.90	(NULL)
20.05	6.76	(NULL)
24.00	3.41	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.65 WATERSHED INCHES, 424.97 CFS-HRS, 35.12 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.96	170.61	(RUNOFF)

6.44	17.00	(RUNOFF)
6.93	10.43	(RUNOFF)
7.93	7.18	(RUNOFF)
23.71	1.01	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.34 WATERSHED INCHES, 108.07 CFS-HRS, 8.93 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	214.18	(NULL)
6.57	213.08	(NULL)
12.70	12.71	(NULL)
19.93	8.68	(NULL)
23.70	4.41	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.03	18.69	69.18
5.81	DISCHG	118.11	164.57	212.21	196.27	139.69	159.74	182.95	199.38	209.59	213.04
6.64	DISCHG	210.92	208.02	201.86	192.82	181.76	168.45	153.76	140.75	128.28	116.45

1

7.47	DISCHG	105.46	95.45	86.47	78.48	71.46	65.34	60.06	54.55	48.48	44.71
8.30	DISCHG	41.53	38.63	35.99	33.61	31.46	29.52	27.78	26.21	24.81	23.57
9.13	DISCHG	22.49	21.55	20.73	20.04	19.44	18.95	18.53	18.18	17.89	17.66
9.96	DISCHG	17.46	17.14	16.42	16.18	15.98	15.72	15.48	15.25	15.06	14.82
10.79	DISCHG	14.57	14.30	14.07	13.88	13.74	13.58	13.43	13.25	13.13	13.05
11.62	DISCHG	13.02	12.96	12.89	12.80	12.75	12.73	12.76	12.75	12.73	12.67
12.45	DISCHG	12.65	12.65	12.70	12.71	12.70	12.65	12.65	12.62	12.40	12.35
13.28	DISCHG	12.30	12.20	12.12	12.05	12.02	11.95	11.86	11.72	11.63	11.54
14.11	DISCHG	11.36	11.26	11.18	11.10	11.02	10.94	10.87	10.80	10.73	10.67
14.94	DISCHG	10.62	10.55	10.23	10.11	10.03	9.95	9.85	9.75	9.64	9.54
15.77	DISCHG	9.44	9.34	9.25	9.16	9.08	9.01	8.95	8.89	8.84	8.80
16.60	DISCHG	8.77	8.74	8.71	8.69	8.68	8.66	8.65	8.65	8.64	8.64
17.43	DISCHG	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63	8.63
18.26	DISCHG	8.64	8.64	8.64	8.64	8.64	8.65	8.65	8.65	8.65	8.66
19.09	DISCHG	8.66	8.66	8.66	8.66	8.67	8.67	8.67	8.67	8.68	8.68
19.92	DISCHG	8.68	8.68	8.09	7.79	7.69	7.51	7.32	7.12	6.95	6.75
20.75	DISCHG	6.52	6.25	6.01	5.80	5.65	5.49	5.33	5.14	4.99	4.88
21.58	DISCHG	4.83	4.78	4.71	4.61	4.54	4.50	4.51	4.51	4.49	4.43
22.41	DISCHG	4.39	4.38	4.41	4.43	4.42	4.38	4.35	4.34	4.38	4.40
23.24	DISCHG	4.40	4.37	4.34	4.34	4.37	4.40	4.40	4.37	4.34	4.34
24.07	DISCHG	3.88	3.45	3.34	3.21	3.04	2.84	2.62	2.40	2.17	1.94

RUNOFF VOLUME ABOVE BASEFLOW = 1.58 WATERSHED INCHES, 533.04 CFS-HRS, 44.05 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	710.12	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 2.07 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.19	21.42	84.94
5.81	DISCHG	166.17	271.92	406.33	496.06	542.74	638.06	699.89	709.18	683.65	638.61
6.64	DISCHG	589.32	546.51	508.88	474.49	442.51	411.22	380.56	352.98	327.15	303.01
7.47	DISCHG	280.91	261.15	243.81	228.82	215.96	205.00	195.67	186.70	177.30	169.96
8.30	DISCHG	162.84	155.56	148.46	141.83	135.88	130.64	126.05	122.00	118.41	115.21
9.13	DISCHG	112.34	109.78	107.49	105.44	103.62	101.99	100.53	99.21	98.02	96.94
9.96	DISCHG	95.95	94.85	93.31	92.12	90.83	89.32	87.75	86.19	84.74	83.37
10.79	DISCHG	82.10	80.91	79.84	78.86	77.97	77.09	76.22	75.29	74.34	73.31
11.62	DISCHG	72.22	70.99	69.69	68.31	66.94	65.59	64.28	62.97	61.70	60.47
12.45	DISCHG	59.33	58.28	57.32	56.40	55.53	54.70	53.97	53.27	52.39	51.66
13.28	DISCHG	50.92	50.10	49.31	48.54	47.87	47.22	46.63	46.06	45.58	45.14
14.11	DISCHG	44.60	44.14	43.68	43.22	42.76	42.33	41.92	41.56	41.23	40.93
14.94	DISCHG	40.65	40.38	39.84	39.46	39.05	38.57	38.04	37.50	36.99	36.52
15.77	DISCHG	36.10	35.72	35.38	35.06	34.78	34.51	34.27	34.05	33.85	33.66
16.60	DISCHG	33.49	33.33	33.19	33.05	32.93	32.82	32.71	32.61	32.52	32.44
17.43	DISCHG	32.36	32.28	32.22	32.15	32.10	32.04	31.99	31.95	31.90	31.86
18.26	DISCHG	31.83	31.80	31.77	31.74	31.71	31.69	31.67	31.65	31.64	31.62
19.09	DISCHG	31.61	31.60	31.59	31.58	31.57	31.56	31.56	31.55	31.55	31.54

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19.92	DISCHG	31.54	31.53	30.90	30.41	29.93	29.19	28.26	27.26	26.32	25.44
20.75	DISCHG	24.64	23.90	23.26	22.69	22.20	21.73	21.29	20.85	20.48	20.15
21.58	DISCHG	19.88	19.62	19.36	19.08	18.85	18.66	18.50	18.34	18.18	17.99
22.41	DISCHG	17.83	17.70	17.61	17.51	17.40	17.26	17.15	17.06	17.02	16.96
23.24	DISCHG	16.88	16.78	16.70	16.65	16.63	16.60	16.55	16.48	16.42	16.39
24.07	DISCHG	15.86	15.22	14.70	13.98	13.05	12.02	11.02	10.10	9.27	8.54

RUNOFF VOLUME ABOVE BASEFLOW = 1.32 WATERSHED INCHES, 1761.97 CFS-HRS, 145.61 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	314.34	(RUNOFF)
9.93	8.19	(RUNOFF)
13.82	5.43	(RUNOFF)
19.88	4.19	(RUNOFF)
23.90	2.12	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.06 WATERSHED INCHES, 298.20 CFS-HRS, 24.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	129.61	(RUNOFF)
9.95	5.33	(RUNOFF)
12.95	4.12	(RUNOFF)
19.91	2.86	(RUNOFF)
23.92	1.45	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.19 WATERSHED INCHES, 152.63 CFS-HRS, 12.61 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	105.81	(RUNOFF)
19.96	2.03	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.28 WATERSHED INCHES, 111.92 CFS-HRS, 9.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	58.94	(RUNOFF)
7.93	2.54	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 42.31 CFS-HRS, 3.50 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID
+ FROM XSECTION 44
+ TO XSECTION 43
STARTING TIME = .00 RAIN DEPTH = 3.05 RAIN DURATION= 1.00 RAIN TABLE NO.= 8 ANT. MOIST. COND= 3
ALTERNATE NO.= 2 STORM NO.= 1 MAIN TIME INCREMENT = .08 HOURS

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)

.82	153.57	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 123.22 CFS-HRS, 10.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.15	103.27	64.56

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 123.25 CFS-HRS, 10.19 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	141.86	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 98.53 CFS-HRS, 8.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.86	188.63	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 221.78 CFS-HRS, 18.33 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	274.75	(RUNOFF)
1.95	29.59	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 160.18 CFS-HRS, 13.24 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	429.92	64.94

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 381.97 CFS-HRS, 31.57 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	359.57	64.87

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .32 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.11	1.96	12.06	28.07	31.34	34.89
.00	ELEV	57.70	57.70	57.70	57.70	57.72	58.01	59.61	62.27	63.09	63.97
.83	DISCHG	194.69	351.27	309.50	286.44	267.87	242.25	210.37	180.42	154.73	135.90
.83	ELEV	64.72	64.87	64.83	64.81	64.79	64.76	64.73	64.71	64.66	64.62
1.66	DISCHG	122.40	111.97	103.61	96.77	91.22	84.42	73.46	70.08	64.88	59.00
1.66	ELEV	64.60	64.58	64.56	64.55	64.53	64.52	64.49	64.45	64.38	64.31
2.49	DISCHG	53.01	47.21	41.72	36.64	34.84	34.59	34.33	34.06	33.78	33.49
2.49	ELEV	64.23	64.16	64.09	64.02	63.96	63.90	63.83	63.76	63.69	63.62
3.32	DISCHG	33.20	32.91	32.62	32.33	32.04	31.75	31.46	31.17	30.89	30.60
3.32	ELEV	63.55	63.48	63.41	63.33	63.26	63.19	63.12	63.04	62.97	62.90
4.15	DISCHG	30.32	30.04	29.77	29.49	29.22	28.95	28.68	28.42	28.15	27.89
4.15	ELEV	62.83	62.76	62.69	62.62	62.55	62.49	62.42	62.35	62.29	62.22
4.98	DISCHG	27.63	27.38	27.13	25.19	21.83	18.92	16.39	14.24	12.58	11.10
4.98	ELEV	62.16	62.09	62.03	61.71	61.17	60.71	60.30	59.96	59.69	59.46
5.81	DISCHG	9.80	8.66	7.64	6.75	5.96	5.26	4.65	4.10	3.62	3.20
5.81	ELEV	59.26	59.07	58.91	58.77	58.65	58.53	58.44	58.35	58.27	58.21
6.64	DISCHG	2.82	2.49	2.20	1.94	1.72	1.52	1.34	1.18	1.04	.92
6.64	ELEV	58.15	58.10	58.05	58.01	57.97	57.94	57.91	57.89	57.87	57.85
7.47	DISCHG	.81	.72	.63	.56	.49	.44	.39	.34	.30	.27
7.47	ELEV	57.83	57.81	57.80	57.79	57.78	57.77	57.76	57.75	57.75	57.74
8.30	DISCHG	.23	.21	.18	.16	.14	.13	.11	.10	.09	.08

8.30	ELEV	57.74	57.73	57.73	57.73	57.72	57.72	57.72	57.72	57.71	57.71
9.13	DISCHG	.07	.06	.05	.05	.04	.04	.03	.03	.02	.02
9.13	ELEV	57.71	57.71	57.71	57.71	57.71	57.71	57.71	57.70	57.70	57.70
9.96	DISCHG	.02	.02	.02	.01	.01	.01	.01	.01		
9.96	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70		

1

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 382.26 CFS-HRS, 31.59 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.70	132.93	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.09 WATERSHED INCHES, 85.17 CFS-HRS, 7.04 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.30	238.37	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 381.64 CFS-HRS, 31.54 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.09	76.05	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.09 WATERSHED INCHES, 85.14 CFS-HRS, 7.04 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.79	167.30	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.72 WATERSHED INCHES, 128.80 CFS-HRS, 10.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 2

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(230.66) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 5 %.
+ XSECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	230.66	(RUNOFF)
1.95	21.38	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .09 SQ.MI.

.00	DISCHG	.00	.00	.00	.03	3.91	32.81	117.92	218.67	217.03	165.38
.83	DISCHG	124.86	98.03	80.51	72.55	64.29	48.80	37.48	28.21	23.41	21.79
1.66	DISCHG	21.24	21.07	21.01	20.97	21.02	18.01	8.81	3.13	1.13	.39

1

2.49	DISCHG	.13	.03	.00

RUNOFF VOLUME ABOVE BASEFLOW = 2.07 WATERSHED INCHES, 124.08 CFS-HRS, 10.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.20	320.27	92.39

TIME(HRS)		FIRST HYDROGRAPH POINT =	.00 HOURS		TIME INCREMENT =	.08 HOURS		DRAINAGE AREA =		.44 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.33	4.56	26.96	78.25	140.65	180.07
.00	ELEV	79.00	79.00	79.00	79.00	79.01	79.16	79.97	81.81	84.04	85.26
.83	DISCHG	184.76	217.52	277.84	306.40	318.70	318.90	307.35	286.45	260.91	235.49
.83	ELEV	85.41	86.71	89.94	91.59	92.30	92.31	91.64	90.43	89.01	87.65
1.66	DISCHG	212.19	192.35	175.56	161.48	149.58	138.85	126.67	111.97	98.97	87.97
1.66	ELEV	86.43	85.64	85.12	84.68	84.32	83.98	83.54	83.02	82.55	82.15
2.49	DISCHG	78.97	71.08	63.95	57.39	51.31	46.51	43.03	40.49	38.62	37.21
2.49	ELEV	81.83	81.55	81.29	81.06	80.84	80.67	80.54	80.45	80.38	80.33
3.32	DISCHG	36.13	35.29	34.60	34.03	33.54	33.11	32.72	32.35	32.01	31.69
3.32	ELEV	80.30	80.27	80.24	80.22	80.20	80.19	80.17	80.16	80.15	80.14
4.15	DISCHG	31.37	31.07	30.77	30.48	30.20	29.91	29.64	29.36	29.09	28.82
4.15	ELEV	80.13	80.11	80.10	80.09	80.08	80.07	80.06	80.05	80.04	80.03
4.98	DISCHG	28.55	28.29	28.02	27.76	27.02	25.52	23.62	21.53	19.43	17.45
4.98	ELEV	80.02	80.01	80.01	80.00	79.97	79.92	79.85	79.77	79.70	79.63
5.81	DISCHG	15.62	13.94	12.42	11.04	9.80	8.69	7.70	6.82	6.04	5.34
5.81	ELEV	79.56	79.50	79.45	79.40	79.35	79.31	79.28	79.24	79.22	79.19
6.64	DISCHG	4.72	4.17	3.69	3.26	2.88	2.54	2.25	1.98	1.75	1.55
6.64	ELEV	79.17	79.15	79.13	79.12	79.10	79.09	79.08	79.07	79.06	79.06
7.47	DISCHG	1.37	1.21	1.07	.94	.83	.73	.65	.57	.50	.44
7.47	ELEV	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02	79.02	79.02
8.30	DISCHG	.39	.35	.31	.27	.24	.21	.19	.16	.14	.13
8.30	ELEV	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.00
9.13	DISCHG	.11	.10	.09	.08	.07	.06	.05	.05	.04	.04
9.13	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.03	.03	.02	.02	.02	.02	.01	.01	.01	.01
9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.00									
10.79	ELEV	79.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.81 WATERSHED INCHES, 510.44 CFS-HRS, 42.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.48	265.57	89.27

TIME(HRS)		FIRST HYDROGRAPH POINT =	.00 HOURS		TIME INCREMENT =	.08 HOURS		DRAINAGE AREA =		.44 SQ.MI.
1										

.00	DISCHG	.00	.00	.00	.00	.26	3.66	22.47	69.32	131.71	155.19
.00	ELEV	79.00	79.00	79.00	79.00	79.01	79.13	79.81	81.49	83.72	84.49
.83	DISCHG	173.31	191.83	212.13	229.63	245.13	253.53	260.32	264.49	265.54	263.56
.83	ELEV	85.05	85.63	86.43	87.34	88.16	88.61	88.98	89.21	89.27	89.16
1.66	DISCHG	259.03	252.56	244.75	230.35	213.98	188.20	151.29	117.44	98.83	90.50
1.66	ELEV	88.91	88.56	88.14	87.38	86.53	85.51	84.37	83.21	82.54	82.25
2.49	DISCHG	79.57	72.50	64.75	58.41	52.10	47.14	43.45	40.82	38.85	37.39
2.49	ELEV	81.85	81.60	81.32	81.09	80.87	80.69	80.56	80.46	80.39	80.34
3.32	DISCHG	36.27	35.40	34.69	34.11	33.61	33.17	32.77	32.40	32.06	31.73
3.32	ELEV	80.30	80.27	80.24	80.22	80.21	80.19	80.18	80.16	80.15	80.14
4.15	DISCHG	31.42	31.11	30.82	30.52	30.24	29.95	29.67	29.40	29.13	28.86
4.15	ELEV	80.13	80.12	80.11	80.09	80.08	80.07	80.06	80.05	80.04	80.03
4.98	DISCHG	28.59	28.32	28.06	27.80	27.17	25.78	23.90	21.84	19.73	17.73
4.98	ELEV	80.03	80.02	80.01	80.00	79.97	79.92	79.86	79.78	79.71	79.64
5.81	DISCHG	15.88	14.18	12.63	11.23	9.97	8.85	7.84	6.94	6.14	5.44
5.81	ELEV	79.57	79.51	79.45	79.40	79.36	79.32	79.28	79.25	79.22	79.19
6.64	DISCHG	4.81	4.25	3.76	3.32	2.93	2.59	2.29	2.02	1.78	1.58
6.64	ELEV	79.17	79.15	79.13	79.12	79.11	79.09	79.08	79.07	79.06	79.06
7.47	DISCHG	1.39	1.23	1.08	.96	.84	.75	.66	.58	.51	.45
7.47	ELEV	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02	79.02	79.02
8.30	DISCHG	.40	.35	.31	.27	.24	.21	.19	.17	.15	.13
8.30	ELEV	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.00
9.13	DISCHG	.11	.10	.09	.08	.07	.06	.05	.05	.04	.04
9.13	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.03	.03	.02	.02	.02	.02	.01	.01	.01	.01
9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.00									
10.79	ELEV	79.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.81 WATERSHED INCHES, 510.23 CFS-HRS, 42.17 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.64	230.44	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.08 WATERSHED INCHES, 209.22 CFS-HRS, 17.29 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.61	264.26	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.81 WATERSHED INCHES, 510.60 CFS-HRS, 42.20 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.19	358.48	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.88 WATERSHED INCHES, 719.82 CFS-HRS, 59.49 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.55	284.34	(RUNOFF)
1.95	24.19	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.05 WATERSHED INCHES, 132.23 CFS-HRS, 10.93 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	518.77	44.14
1.08	423.16	43.94

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.06	18.69	121.67	381.45	514.29	462.76	424.81
.00	ELEV	34.00	34.00	34.00	34.00	35.30	38.32	43.56	44.13	44.05	43.96
.83	DISCHG	411.80	405.30	409.08	423.15	410.73	394.92	380.63	368.84	363.22	358.10
.83	ELEV	43.84	43.78	43.81	43.94	43.83	43.68	43.55	43.44	43.39	43.34
1.66	DISCHG	351.23	342.61	332.58	321.86	307.19	274.62	232.59	192.49	155.22	128.14
1.66	ELEV	43.27	43.19	43.10	43.00	42.86	42.41	40.94	39.78	39.01	38.45
2.49	DISCHG	111.35	96.88	85.97	76.13	67.77	60.10	53.67	48.61	44.80	41.92
2.49	ELEV	38.10	37.74	37.43	37.15	36.92	36.70	36.52	36.38	36.27	36.19
3.32	DISCHG	39.75	38.10	36.83	35.82	35.01	34.34	33.77	33.27	32.83	32.42
3.32	ELEV	36.13	36.09	36.05	36.02	36.00	35.97	35.95	35.92	35.91	35.89
4.15	DISCHG	32.05	31.70	31.37	31.05	30.74	30.44	30.14	29.86	29.57	29.29
4.15	ELEV	35.87	35.86	35.84	35.83	35.82	35.80	35.79	35.78	35.77	35.75
4.98	DISCHG	29.02	28.75	28.48	28.21	27.95	27.45	26.38	24.79	22.90	20.87
4.98	ELEV	35.74	35.73	35.72	35.71	35.70	35.68	35.63	35.56	35.48	35.40
5.81	DISCHG	18.86	16.95	15.17	13.54	12.06	10.72	9.52	8.44	7.48	6.63
5.81	ELEV	35.31	35.23	35.15	35.08	35.02	34.93	34.82	34.73	34.65	34.57
6.64	DISCHG	5.86	5.18	4.59	4.05	3.58	3.16	2.80	2.47	2.18	1.93
6.64	ELEV	34.51	34.45	34.40	34.35	34.31	34.27	34.24	34.21	34.19	34.17
7.47	DISCHG	1.70	1.50	1.33	1.17	1.03	.91	.81	.71	.63	.55
7.47	ELEV	34.15	34.13	34.11	34.10	34.09	34.08	34.07	34.06	34.05	34.05
8.30	DISCHG	.49	.43	.38	.34	.30	.26	.23	.20	.18	.16
8.30	ELEV	34.04	34.04	34.03	34.03	34.03	34.02	34.02	34.02	34.02	34.01
9.13	DISCHG	.14	.12	.11	.09	.08	.07	.06	.06	.05	.04
9.13	ELEV	34.01	34.01	34.01	34.01	34.01	34.01	34.01	34.00	34.00	34.00
9.96	DISCHG	.04	.03	.03	.03	.02	.02	.02	.01	.01	.01
9.96	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00

1

10.79	DISCHG	.01	.00

10.79 ELEV 34.00 34.00

RUNOFF VOLUME ABOVE BASEFLOW = 1.90 WATERSHED INCHES, 852.05 CFS-HRS, 70.41 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	518.77	(NULL)
1.08	423.16	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.00	.06	18.69	121.67	381.45	514.29	462.76	424.81
.83	DISCHG	411.80	405.30	409.08	423.15	410.73	394.92	380.63	368.84	363.22	358.10
1.66	DISCHG	351.23	342.61	332.58	321.86	307.19	274.62	232.59	192.49	155.22	128.14
2.49	DISCHG	111.35	96.88	85.97	76.13	67.77	60.10	53.67	48.61	44.80	41.92
3.32	DISCHG	39.75	38.10	36.83	35.82	35.01	34.34	33.77	33.27	32.83	32.42
4.15	DISCHG	32.05	31.70	31.37	31.05	30.74	30.44	30.14	29.86	29.57	29.29
4.98	DISCHG	29.02	28.75	28.48	28.21	27.95	27.45	26.38	24.79	22.90	20.87
5.81	DISCHG	18.86	16.95	15.17	13.54	12.06	10.72	9.52	8.44	7.48	6.63
6.64	DISCHG	5.86	5.18	4.59	4.05	3.58	3.16	2.80	2.47	2.18	1.93
7.47	DISCHG	1.70	1.50	1.33	1.17	1.03	.91	.81	.71	.63	.55
8.30	DISCHG	.49	.43	.38	.34	.30	.26	.23	.20	.18	.16
9.13	DISCHG	.14	.12	.11	.09	.08	.07	.06	.06	.05	.04
9.96	DISCHG	.04	.03	.03	.03	.02	.02	.02	.01	.01	.01
10.79	DISCHG	.01	.00								

RUNOFF VOLUME ABOVE BASEFLOW = 1.90 WATERSHED INCHES, 852.05 CFS-HRS, 70.41 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.20	412.49	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.90 WATERSHED INCHES, 852.27 CFS-HRS, 70.43 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.64	126.90	(RUNOFF)
1.95	14.37	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 73.60 CFS-HRS, 6.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.63	138.11	(RUNOFF)
1.95	13.76	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.96 WATERSHED INCHES, 77.33 CFS-HRS, 6.39 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.79	473.65	(NULL)
1.13	454.72	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.88 WATERSHED INCHES, 925.86 CFS-HRS, 76.51 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.71	575.80	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.89 WATERSHED INCHES, 1003.19 CFS-HRS, 82.90 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	533.86	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.89 WATERSHED INCHES, 1002.81 CFS-HRS, 82.87 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.70	196.36	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.91 WATERSHED INCHES, 125.87 CFS-HRS, 10.40 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.78	277.48	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.91 WATERSHED INCHES, 208.49 CFS-HRS, 17.23 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD - STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.75	458.30	73.61

RUNOFF VOLUME ABOVE BASEFLOW = 1.91 WATERSHED INCHES, 334.36 CFS-HRS, 27.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.49	105.11	71.10

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

.00	ELEV	70.00	70.00	70.00	70.00	70.00	70.01	70.04	70.12	70.27	70.46
.83	ELEV	70.63	70.78	70.90	70.99	71.03	71.06	71.08	71.09	71.10	71.09
1.66	ELEV	71.09	71.08	71.07	71.06	71.05	71.04	71.02	71.01	70.99	70.95
2.49	ELEV	70.92	70.88	70.85	70.81	70.78	70.75	70.72	70.69	70.66	70.63
3.32	ELEV	70.61	70.58	70.56	70.53	70.51	70.49	70.47	70.45	70.43	70.41
4.15	ELEV	70.40	70.38	70.37	70.35	70.34	70.32	70.31	70.30	70.28	70.27
4.98	ELEV	70.26	70.25	70.24	70.23	70.22	70.21	70.20	70.19	70.19	70.18
5.81	ELEV	70.17	70.16	70.16	70.15	70.14	70.14	70.13	70.13	70.12	70.12
6.64	ELEV	70.11	70.11	70.10	70.10	70.10	70.09	70.09	70.08	70.08	70.08
7.47	ELEV	70.07	70.07	70.07	70.07	70.06	70.06	70.06	70.06	70.05	70.05
8.30	ELEV	70.05	70.05	70.04	70.04	70.04	70.04	70.04	70.04	70.03	70.03
9.13	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.02	70.02	70.02	70.02
9.96	ELEV	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.01	70.01
10.79	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
11.62	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
12.45	ELEV	70.01	70.01	70.01	70.01	70.00	70.00	70.00	70.00	70.00	70.00

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13.28	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.11	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.94	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
15.77	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
16.60	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
17.43	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
18.26	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
19.09	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
19.92	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00			

RUNOFF VOLUME ABOVE BASEFLOW = 1.91 WATERSHED INCHES, 334.22 CFS-HRS, 27.62 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	111.30	(RUNOFF)
1.95	8.32	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 52.68 CFS-HRS, 4.35 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	123.92	(NULL)
1.15	119.29	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.97 WATERSHED INCHES, 386.90 CFS-HRS, 31.97 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.70	111.83	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.96 WATERSHED INCHES, 386.75 CFS-HRS, 31.96 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	304.65	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 222.84 CFS-HRS, 18.42 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.78	374.77	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.04 WATERSHED INCHES, 609.60 CFS-HRS, 50.38 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.86	881.77	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.94 WATERSHED INCHES, 1612.41 CFS-HRS, 133.25 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	876.10	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.94 WATERSHED INCHES, 1612.47 CFS-HRS, 133.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	222.26	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 162.58 CFS-HRS, 13.44 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	1048.99	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.96 WATERSHED INCHES, 1775.04 CFS-HRS, 146.69 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 9 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

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OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.04	1021.11	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.96 WATERSHED INCHES, 1774.89 CFS-HRS, 146.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	281.66	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 206.02 CFS-HRS, 17.03 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	1209.94	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

.00	DISCHG	.00	.00	.00	.13	2.81	19.20	78.71	209.56	410.75	669.58
.83	DISCHG	947.54	1145.16	1208.31	1179.81	1113.84	1040.56	973.14	912.21	849.93	790.15
1.66	DISCHG	736.00	692.14	659.41	636.25	619.40	605.12	588.46	566.70	537.58	498.19
2.49	DISCHG	453.20	407.51	363.42	322.32	285.75	254.13	227.27	204.57	185.28	168.72
3.32	DISCHG	154.37	141.93	131.20	121.98	114.09	107.36	101.60	96.64	92.33	88.54
4.15	DISCHG	85.18	82.15	79.39	76.85	74.50	72.29	70.22	68.25	66.38	64.60
4.98	DISCHG	62.90	61.26	59.70	58.19	56.74	55.35	54.00	52.71	51.46	50.21
5.81	DISCHG	48.88	47.36	45.58	43.54	41.29	38.92	36.49	34.07	31.72	29.47
6.64	DISCHG	27.35	25.36	23.52	21.81	20.24	18.80	17.47	16.26	15.15	14.13
7.47	DISCHG	13.20	12.34	11.56	10.83	10.17	9.56	8.99	8.47	7.99	7.54
8.30	DISCHG	7.12	6.74	6.38	6.04	5.73	5.44	5.17	4.91	4.67	4.44
9.13	DISCHG	4.23	4.03	3.84	3.66	3.49	3.33	3.18	3.03	2.90	2.77
9.96	DISCHG	2.64	2.53	2.42	2.31	2.21	2.11	2.02	1.93	1.85	1.77
10.79	DISCHG	1.70	1.62	1.55	1.49	1.42	1.36	1.30	1.25	1.19	1.14
11.62	DISCHG	1.10	1.05	1.01	.97	.93	.89	.85	.82	.78	.75
12.45	DISCHG	.72	.69	.66	.63	.61	.58	.56	.53	.51	.49
13.28	DISCHG	.47	.45	.43	.41	.40	.38	.37	.35	.34	.32
14.11	DISCHG	.31	.29	.28	.27	.26	.25	.24	.23	.22	.21
14.94	DISCHG	.20	.19	.19	.18	.17	.16	.16	.15	.14	.14

15.77	DISCHG	.13	.13	.12	.12	.11	.10	.10	.10	.09	.09
16.60	DISCHG	.09	.08	.08	.08	.07	.07	.07	.06	.06	.06
17.43	DISCHG	.05	.05	.05	.05	.05	.05	.04	.04	.04	.04
18.26	DISCHG	.04	.03	.03	.03	.03	.03	.03	.03	.03	.03
19.09	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.02	.01
19.92	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01

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20.75 DISCHG .01 .00

RUNOFF VOLUME ABOVE BASEFLOW = 1.98 WATERSHED INCHES, 1980.92 CFS-HRS, 163.70 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	358.56	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 209.79 CFS-HRS, 17.34 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.85	262.37	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 209.71 CFS-HRS, 17.33 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.67	260.14	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 155.50 CFS-HRS, 12.85 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.76	463.16	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 365.21 CFS-HRS, 30.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.03	347.21	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 365.11 CFS-HRS, 30.17 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.76	169.88	(RUNOFF)

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RUNOFF VOLUME ABOVE BASEFLOW = 2.48 WATERSHED INCHES, 121.54 CFS-HRS, 10.04 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.70	167.76	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.06 WATERSHED INCHES, 107.85 CFS-HRS, 8.91 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	461.41	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.37 WATERSHED INCHES, 486.65 CFS-HRS, 40.22 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.23	458.70	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.31 WATERSHED INCHES, 594.42 CFS-HRS, 49.12 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.55	355.42	(RUNOFF)
1.95	30.24	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.05 WATERSHED INCHES, 165.29 CFS-HRS, 13.66 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	383.83	(NULL)
1.11	529.95	(NULL)

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.52 SQ.MI.
.00	DISCHG	.00	.00	.00	.03	18.61	112.39	335.43	383.73	326.40	340.25
.83	DISCHG	394.90	446.11	492.71	527.79	519.91	507.61	487.33	462.02	435.25	404.12
1.66	DISCHG	370.76	337.36	305.42	276.28	250.31	212.09	180.88	160.80	142.29	124.32
2.49	DISCHG	107.18	91.29	76.90	64.11	52.94	43.35	35.21	28.40	22.76	18.14
3.32	DISCHG	14.38	11.35	8.92	6.98	5.45	4.24	3.29	2.55	1.97	1.51

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TR20 XEQ STRATTON BASIN W/ EX. DEVEL./EX. FACILITIES - 10 & 100 YEAR FLOWS JOB 1 PASS 3
REV 09/01/83 24-HR/AMC II STORM #1: 100 YR. STORM #2: 10 YEAR PAGE 63

4.15	DISCHG	1.16	.89	.68	.52	.40	.30	.23	.17	.13	.10
4.98	DISCHG	.07	.05	.04	.03	.02	.02	.01	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = 2.25 WATERSHED INCHES, 759.71 CFS-HRS, 62.78 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.04	1714.64	(NULL)

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		2.07 SQ.MI.
.00	DISCHG	.00	.00	.00	.16	21.42	131.59	414.14	593.30	737.15	1009.83
.83	DISCHG	1342.44	1591.27	1701.01	1707.61	1633.75	1548.16	1460.47	1374.23	1285.18	1194.27
1.66	DISCHG	1106.76	1029.50	964.84	912.53	869.70	817.21	769.34	727.50	679.88	622.51
2.49	DISCHG	560.38	498.80	440.32	386.43	338.70	297.47	262.48	232.97	208.04	186.85
3.32	DISCHG	168.75	153.28	140.11	128.96	119.54	111.60	104.89	99.18	94.30	90.06
4.15	DISCHG	86.34	83.04	80.07	77.37	74.89	72.60	70.45	68.43	66.52	64.70
4.98	DISCHG	62.97	61.32	59.74	58.22	56.76	55.36	54.01	52.72	51.46	50.21
5.81	DISCHG	48.88	47.36	45.58	43.54	41.29	38.92	36.49	34.07	31.72	29.47
6.64	DISCHG	27.35	25.36	23.52	21.81	20.24	18.80	17.47	16.26	15.15	14.13
7.47	DISCHG	13.20	12.34	11.56	10.83	10.17	9.56	8.99	8.47	7.99	7.54
8.30	DISCHG	7.12	6.74	6.38	6.04	5.73	5.44	5.17	4.91	4.67	4.44
9.13	DISCHG	4.23	4.03	3.84	3.66	3.49	3.33	3.18	3.03	2.90	2.77
9.96	DISCHG	2.64	2.53	2.42	2.31	2.21	2.11	2.02	1.93	1.85	1.77
10.79	DISCHG	1.70	1.62	1.55	1.49	1.42	1.36	1.30	1.25	1.19	1.14
11.62	DISCHG	1.10	1.05	1.01	.97	.93	.89	.85	.82	.78	.75
12.45	DISCHG	.72	.69	.66	.63	.61	.58	.56	.53	.51	.49
13.28	DISCHG	.47	.45	.43	.41	.40	.38	.37	.35	.34	.32
14.11	DISCHG	.31	.29	.28	.27	.26	.25	.24	.23	.22	.21
14.94	DISCHG	.20	.19	.19	.18	.17	.16	.16	.15	.14	.14
15.77	DISCHG	.13	.13	.12	.12	.11	.10	.10	.10	.09	.09
16.60	DISCHG	.09	.08	.08	.08	.07	.07	.07	.06	.06	.06
17.43	DISCHG	.05	.05	.05	.05	.05	.05	.04	.04	.04	.04

18.26	DISCHG	.04	.03	.03	.03	.03	.03	.03	.03	.03	.03
19.09	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.02	.01
19.92	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
20.75	DISCHG	.01	.00								

RUNOFF VOLUME ABOVE BASEFLOW = 2.05 WATERSHED INCHES, 2740.63 CFS-HRS, 226.49 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.81	464.19	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.55 WATERSHED INCHES, 368.46 CFS-HRS, 30.45 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	272.12	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.95 WATERSHED INCHES, 249.06 CFS-HRS, 20.58 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.86	208.05	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.02 WATERSHED INCHES, 176.16 CFS-HRS, 14.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.64	104.41	(RUNOFF)
1.95	9.29	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 58.94 CFS-HRS, 4.87 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID
+ FROM XSECTION 44
+ TO XSECTION 43
STARTING TIME = .00 RAIN DEPTH = 2.06 RAIN DURATION= 1.00 RAIN TABLE NO.= 9 ANT. MOIST. COND= 3
ALTERNATE NO.= 2 STORM NO.= 2 MAIN TIME INCREMENT = .06 HOURS

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	65.36	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 66.73 CFS-HRS, 5.51 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.16	40.05	64.06

1

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 66.71 CFS-HRS, 5.51 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	61.82	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 53.29 CFS-HRS, 4.40 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	75.39	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 120.00 CFS-HRS, 9.92 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	123.74	(RUNOFF)
1.23	44.22	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 86.59 CFS-HRS, 7.16 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	187.51	64.71

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 206.59 CFS-HRS, 17.07 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.84	79.08	64.51

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .32 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.26	3.32	14.11	27.49	28.89	30.09
.00	ELEV	57.70	57.70	57.70	57.70	57.74	58.23	59.94	62.12	62.47	62.77
.83	DISCHG	31.10	31.98	32.78	33.53	34.27	34.98	47.92	58.15	65.23	69.65
.83	ELEV	63.02	63.24	63.44	63.63	63.82	64.00	64.17	64.30	64.39	64.44
1.66	DISCHG	72.33	73.95	79.00	76.22	73.87	72.71	69.75	64.95	59.20	53.31
1.66	ELEV	64.48	64.50	64.51	64.50	64.50	64.48	64.45	64.38	64.31	64.23

1

2.49	DISCHG	47.63	42.31	37.41	34.89	34.66	34.41	34.15	33.89	33.62	33.34
2.49	ELEV	64.16	64.09	64.03	63.97	63.91	63.85	63.79	63.72	63.65	63.58
3.32	DISCHG	33.06	32.77	32.49	32.20	31.92	31.63	31.35	31.06	30.78	30.50
3.32	ELEV	63.51	63.44	63.37	63.30	63.23	63.16	63.09	63.02	62.95	62.88
4.15	DISCHG	30.22	29.95	29.67	29.40	29.13	28.86	28.59	28.33	28.07	27.81
4.15	ELEV	62.81	62.74	62.67	62.60	62.53	62.47	62.40	62.33	62.27	62.20
4.98	DISCHG	27.55	27.30	27.05	24.05	20.84	18.06	15.66	13.68	12.08	10.67
4.98	ELEV	62.14	62.07	62.01	61.53	61.01	60.57	60.19	59.87	59.62	59.39
5.81	DISCHG	9.42	8.32	7.34	6.48	5.73	5.06	4.46	3.94	3.48	3.07
5.81	ELEV	59.19	59.02	58.86	58.73	58.61	58.50	58.41	58.33	58.25	58.19
6.64	DISCHG	2.71	2.40	2.11	1.87	1.65	1.46	1.29	1.13	1.00	.88
6.64	ELEV	58.13	58.08	58.04	58.00	57.96	57.93	57.90	57.88	57.86	57.84
7.47	DISCHG	.78	.69	.61	.54	.47	.42	.37	.33	.29	.25
7.47	ELEV	57.82	57.81	57.80	57.79	57.78	57.77	57.76	57.75	57.75	57.74
8.30	DISCHG	.22	.20	.18	.15	.14	.12	.11	.09	.08	.07
8.30	ELEV	57.74	57.73	57.73	57.72	57.72	57.72	57.72	57.71	57.71	57.71
9.13	DISCHG	.06	.06	.05	.04	.04	.03	.03	.03	.02	.02
9.13	ELEV	57.71	57.71	57.71	57.71	57.71	57.71	57.70	57.70	57.70	57.70
9.96	DISCHG	.02	.02	.01	.01	.01	.01	.01	.01		
9.96	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70		

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 206.60 CFS-HRS, 17.07 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	64.70	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 48.67 CFS-HRS, 4.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.22	68.66	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 206.70 CFS-HRS, 17.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.11	32.16	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 48.67 CFS-HRS, 4.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.71	67.53	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .91 WATERSHED INCHES, 67.83 CFS-HRS, 5.61 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 2

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(113.65) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 6 %.
+ XSECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.54	113.65	(RUNOFF)
1.22	33.66	(RUNOFF)

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.09 SQ.MI.
.00	DISCHG	.00	.00	.00	.09	7.06	48.81	106.73	105.86	75.48	54.30
.83	DISCHG	43.24	36.84	34.16	33.39	33.37	33.61	32.69	28.72	24.13	21.86
1.66	DISCHG	21.27	21.18	20.67	20.40	18.97	14.44	6.77	2.41	.86	.30
2.49	DISCHG	.09	.02	.00							

RUNOFF VOLUME ABOVE BASEFLOW = 1.17 WATERSHED INCHES, 70.27 CFS-HRS, 5.81 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.75	79.60	81.85
2.03	88.42	82.17

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.44 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.74	7.40	27.52	55.36	74.37	79.59
.00	ELEV	79.00	79.00	79.00	79.00	79.03	79.27	79.99	80.99	81.67	81.85
.83	DISCHG	75.12	70.09	66.74	65.01	64.64	65.19	65.93	68.39	71.10	73.57
.83	ELEV	81.69	81.51	81.39	81.33	81.32	81.34	81.36	81.45	81.55	81.64
1.66	DISCHG	76.25	79.38	82.53	86.16	88.17	88.16	85.61	81.04	75.83	70.80
1.66	ELEV	81.73	81.85	81.96	82.09	82.16	82.16	82.07	81.91	81.72	81.54
2.49	DISCHG	66.25	61.81	57.41	53.04	49.13	46.04	43.57	41.57	39.95	38.61
2.49	ELEV	81.38	81.22	81.06	80.90	80.76	80.65	80.56	80.49	80.43	80.38
3.32	DISCHG	37.51	36.58	35.79	35.10	34.50	33.96	33.47	33.03	32.62	32.24
3.32	ELEV	80.35	80.31	80.28	80.26	80.24	80.22	80.20	80.18	80.17	80.16
4.15	DISCHG	31.88	31.53	31.20	30.88	30.57	30.27	29.98	29.69	29.41	29.13
4.15	ELEV	80.14	80.13	80.12	80.11	80.10	80.09	80.08	80.06	80.05	80.04
4.98	DISCHG	28.85	28.58	28.31	28.05	27.21	25.89	24.26	22.46	20.63	18.85
4.98	ELEV	80.03	80.02	80.02	80.01	79.98	79.93	79.87	79.81	79.74	79.68

5.81	DISCHG	17.15	15.54	14.03	12.64	11.35	10.18	9.11	8.14	7.27	6.48
5.81	ELEV	79.61	79.56	79.50	79.45	79.41	79.37	79.33	79.29	79.26	79.23
6.64	DISCHG	5.77	5.13	4.56	4.05	3.60	3.19	2.83	2.51	2.22	1.97

1

6.64	ELEV	79.21	79.18	79.16	79.15	79.13	79.11	79.10	79.09	79.08	79.07
7.47	DISCHG	1.74	1.54	1.36	1.21	1.07	.94	.83	.74	.65	.57
7.47	ELEV	79.06	79.06	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02
8.30	DISCHG	.51	.45	.40	.35	.31	.27	.24	.21	.19	.17
8.30	ELEV	79.02	79.02	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01
9.13	DISCHG	.15	.13	.11	.10	.09	.08	.07	.06	.05	.05
9.13	ELEV	79.01	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.04	.04	.03	.03	.02	.02	.02	.02	.01	.01
9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.01	.01	.00							
10.79	ELEV	79.00	79.00	79.00							

RUNOFF VOLUME ABOVE BASEFLOW = .97 WATERSHED INCHES, 274.53 CFS-HRS, 22.69 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.76	79.67	81.86
2.04	88.43	82.17

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.58	6.01	23.81	51.21	72.43	79.50
.00	ELEV	79.00	79.00	79.00	79.00	79.02	79.22	79.85	80.84	81.60	81.85
.83	DISCHG	76.16	70.63	67.19	65.15	64.65	65.07	65.84	67.90	70.77	73.20
.83	ELEV	81.73	81.53	81.41	81.34	81.32	81.33	81.36	81.43	81.54	81.63
1.66	DISCHG	75.86	78.90	82.09	85.60	88.04	88.24	86.13	81.77	76.59	71.50
1.66	ELEV	81.72	81.83	81.94	82.07	82.16	82.16	82.09	81.93	81.75	81.56
2.49	DISCHG	66.87	62.45	58.04	53.67	49.66	46.44	43.90	41.83	40.17	38.79
2.49	ELEV	81.40	81.24	81.08	80.92	80.78	80.67	80.57	80.50	80.44	80.39
3.32	DISCHG	37.66	36.71	35.90	35.20	34.58	34.03	33.54	33.09	32.68	32.29
3.32	ELEV	80.35	80.32	80.29	80.26	80.24	80.22	80.20	80.19	80.17	80.16
4.15	DISCHG	31.93	31.58	31.25	30.93	30.62	30.31	30.02	29.73	29.45	29.17
4.15	ELEV	80.14	80.13	80.12	80.11	80.10	80.09	80.08	80.07	80.06	80.05
4.98	DISCHG	28.89	28.62	28.35	28.09	27.38	26.09	24.51	22.72	20.90	19.10
4.98	ELEV	80.04	80.03	80.02	80.01	79.98	79.94	79.88	79.81	79.75	79.69
5.81	DISCHG	17.39	15.76	14.24	12.83	11.53	10.34	9.26	8.28	7.39	6.59
5.81	ELEV	79.62	79.57	79.51	79.46	79.41	79.37	79.33	79.30	79.26	79.24
6.64	DISCHG	5.86	5.22	4.64	4.12	3.66	3.24	2.88	2.55	2.26	2.00
6.64	ELEV	79.21	79.19	79.17	79.15	79.13	79.12	79.10	79.09	79.08	79.07
7.47	DISCHG	1.77	1.57	1.39	1.23	1.08	.96	.85	.75	.66	.58
7.47	ELEV	79.06	79.06	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02
8.30	DISCHG	.52	.46	.40	.36	.31	.28	.25	.22	.19	.17
8.30	ELEV	79.02	79.02	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01
9.13	DISCHG	.15	.13	.12	.10	.09	.08	.07	.06	.05	.05
9.13	ELEV	79.01	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.04	.04	.03	.03	.02	.02	.02	.02	.01	.01
9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.01	.01	.00							

1

10.79	ELEV	79.00	79.00	79.00

RUNOFF VOLUME ABOVE BASEFLOW = .97 WATERSHED INCHES, 274.49 CFS-HRS, 22.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(113.83) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 6 %.
+ XSECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.54	113.83	(NULL)

1.10	65.46	(NULL)	

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .16 SQ.MI.

.00	DISCHG	.00	.00	.00	.09	7.06	48.81	106.75	106.31	78.79	64.93
.83	DISCHG	63.18	63.94	64.97	65.45	65.26	64.63	62.61	57.56	52.02	48.88
1.66	DISCHG	47.29	45.96	44.04	42.38	39.70	34.08	25.46	20.21	17.63	15.59
2.49	DISCHG	13.51	11.49	9.65	8.05	6.68	5.52	4.55	3.75	3.09	2.54
3.32	DISCHG	2.09	1.72	1.41	1.16	.96	.79	.65	.53	.44	.36
4.15	DISCHG	.29	.24	.20	.16	.13	.11	.09	.07	.06	.05
4.98	DISCHG	.04	.03	.03	.02	.02	.01	.01	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 118.94 CFS-HRS, 9.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	72.42	(NULL)
2.18	87.01	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = .97 WATERSHED INCHES, 274.48 CFS-HRS, 22.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.59	120.48	(NULL)
.97	136.42	(NULL)
1.96	122.56	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.03 WATERSHED INCHES, 393.42 CFS-HRS, 32.51 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.47	143.93	(RUNOFF)
1.21	36.85	(RUNOFF)
1.66	22.95	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.17 WATERSHED INCHES, 75.76 CFS-HRS, 6.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	251.52	41.55
.97	171.76	39.35
1.88	143.25	38.76

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.00	.22	33.18	176.35	250.68	204.76	165.85	162.37
.00	ELEV	34.00	34.00	34.00	34.02	35.92	39.44	41.52	40.04	39.23	39.16
.83	DISCHG	168.08	171.29	171.69	170.29	168.40	166.82	160.15	148.64	141.39	140.00
.83	ELEV	39.27	39.34	39.35	39.32	39.28	39.25	39.11	38.87	38.72	38.69
1.66	DISCHG	141.41	141.76	142.56	143.03	140.14	126.93	113.34	106.82	101.64	95.68
1.66	ELEV	38.72	38.73	38.75	38.76	38.70	38.42	38.15	38.01	37.87	37.70
2.49	DISCHG	89.07	82.46	76.12	70.07	64.29	58.93	54.28	50.40	47.19	44.57
2.49	ELEV	37.52	37.33	37.15	36.98	36.82	36.67	36.54	36.43	36.34	36.27
3.32	DISCHG	42.41	40.63	39.16	37.93	36.90	36.01	35.24	34.57	33.98	33.44
3.32	ELEV	36.21	36.16	36.12	36.08	36.05	36.03	36.01	35.98	35.95	35.93
4.15	DISCHG	32.96	32.52	32.10	31.72	31.36	31.01	30.68	30.36	30.05	29.75
4.15	ELEV	35.91	35.89	35.87	35.86	35.84	35.83	35.81	35.80	35.79	35.77
4.98	DISCHG	29.46	29.17	28.89	28.61	28.34	27.84	26.92	25.65	24.11	22.41
4.98	ELEV	35.76	35.75	35.74	35.73	35.71	35.69	35.65	35.60	35.53	35.46
5.81	DISCHG	20.66	18.93	17.26	15.66	14.17	12.78	11.49	10.31	9.24	8.26
5.81	ELEV	35.39	35.31	35.24	35.17	35.11	35.05	34.99	34.89	34.80	34.71
6.64	DISCHG	7.38	6.58	5.86	5.21	4.64	4.12	3.66	3.24	2.88	2.55
6.64	ELEV	34.64	34.57	34.51	34.45	34.40	34.36	34.32	34.28	34.25	34.22
7.47	DISCHG	2.26	2.00	1.77	1.57	1.39	1.23	1.09	.96	.85	.75
7.47	ELEV	34.20	34.17	34.15	34.14	34.12	34.11	34.09	34.08	34.07	34.06
8.30	DISCHG	.66	.58	.52	.46	.40	.36	.31	.28	.25	.22
8.30	ELEV	34.06	34.05	34.04	34.04	34.03	34.03	34.03	34.02	34.02	34.02

9.13	DISCHG	.19	.17	.15	.13	.12	.10	.09	.08	.07	.06
9.13	ELEV	34.02	34.01	34.01	34.01	34.01	34.01	34.01	34.01	34.01	34.01
9.96	DISCHG	.05	.05	.04	.04	.03	.03	.02	.02	.02	.02
9.96	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00
10.79	DISCHG	.01	.01	.01	.00						
10.79	ELEV	34.00	34.00	34.00	34.00						

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 469.18 CFS-HRS, 38.77 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	251.52	(NULL)
.97	171.76	(NULL)
1.88	143.25	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.00	.22	33.18	176.35	250.68	204.76	165.85	162.37
.83	DISCHG	168.08	171.29	171.69	170.29	168.40	166.82	160.15	148.64	141.39	140.00
1.66	DISCHG	141.41	141.76	142.56	143.03	140.14	126.93	113.34	106.82	101.64	95.68
2.49	DISCHG	89.07	82.46	76.12	70.07	64.29	58.93	54.28	50.40	47.19	44.57
3.32	DISCHG	42.41	40.63	39.16	37.93	36.90	36.01	35.24	34.57	33.98	33.44
4.15	DISCHG	32.96	32.52	32.10	31.72	31.36	31.01	30.68	30.36	30.05	29.75
4.98	DISCHG	29.46	29.17	28.89	28.61	28.34	27.84	26.92	25.65	24.11	22.41
5.81	DISCHG	20.66	18.93	17.26	15.66	14.17	12.78	11.49	10.31	9.24	8.26
6.64	DISCHG	7.38	6.58	5.86	5.21	4.64	4.12	3.66	3.24	2.88	2.55
7.47	DISCHG	2.26	2.00	1.77	1.57	1.39	1.23	1.09	.96	.85	.75
8.30	DISCHG	.66	.58	.52	.46	.40	.36	.31	.28	.25	.22
9.13	DISCHG	.19	.17	.15	.13	.12	.10	.09	.08	.07	.06
9.96	DISCHG	.05	.05	.04	.04	.03	.03	.02	.02	.02	.02
10.79	DISCHG	.01	.01	.01	.00						

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 469.18 CFS-HRS, 38.77 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.20	168.56	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 468.82 CFS-HRS, 38.74 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	53.12	(RUNOFF)
1.24	20.52	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .87 WATERSHED INCHES, 38.19 CFS-HRS, 3.16 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.55	65.18	(RUNOFF)
1.22	21.17	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.09 WATERSHED INCHES, 42.86 CFS-HRS, 3.54 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)

.68	194.56	(NULL)
1.22	189.00	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.03 WATERSHED INCHES, 507.01 CFS-HRS, 41.90 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	251.78	(NULL)
1.22	210.16	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.04 WATERSHED INCHES, 549.87 CFS-HRS, 45.44 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.88	211.07	(NULL)
1.33	209.46	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.04 WATERSHED INCHES, 550.09 CFS-HRS, 45.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	89.83	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 69.26 CFS-HRS, 5.72 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.70	122.14	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 114.72 CFS-HRS, 9.48 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	203.20	71.82

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 183.98 CFS-HRS, 15.20 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.02	54.43	70.59

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

.00	ELEV	70.00	70.00	70.00	70.00	70.00	70.01	70.04	70.11	70.19	70.27
.83	ELEV	70.33	70.38	70.42	70.45	70.48	70.50	70.53	70.55	70.56	70.57
1.66	ELEV	70.58	70.58	70.59	70.59	70.59	70.59	70.59	70.58	70.56	70.55
2.49	ELEV	70.53	70.51	70.49	70.47	70.45	70.43	70.41	70.40	70.38	70.36
3.32	ELEV	70.35	70.33	70.32	70.31	70.29	70.28	70.27	70.26	70.25	70.24
4.15	ELEV	70.23	70.22	70.21	70.20	70.19	70.19	70.18	70.17	70.16	70.16
4.98	ELEV	70.15	70.14	70.14	70.13	70.13	70.12	70.12	70.11	70.11	70.10
5.81	ELEV	70.10	70.09	70.09	70.09	70.08	70.08	70.08	70.07	70.07	70.07
6.64	ELEV	70.06	70.06	70.06	70.06	70.05	70.05	70.05	70.05	70.05	70.04

7.47	ELEV	70.04	70.04	70.04	70.04	70.04	70.03	70.03	70.03	70.03	70.03
8.30	ELEV	70.03	70.03	70.03	70.02	70.02	70.02	70.02	70.02	70.02	70.02
9.13	ELEV	70.02	70.02	70.02	70.02	70.02	70.01	70.01	70.01	70.01	70.01
9.96	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
10.79	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
11.62	ELEV	70.01	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
12.45	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00

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13.28	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.11	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.94	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
15.77	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
16.60	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
17.43	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
18.26	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
19.09	ELEV	70.00	70.00	70.00	70.00						

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 183.93 CFS-HRS, 15.20 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.50	62.75	(RUNOFF)
1.21	13.79	(RUNOFF)
1.62	8.44	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.45 WATERSHED INCHES, 31.78 CFS-HRS, 2.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	67.09	(NULL)
1.88	62.38	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.10 WATERSHED INCHES, 215.70 CFS-HRS, 17.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.07	60.65	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.10 WATERSHED INCHES; 215.73 CFS-HRS, 17.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	147.68	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.26 WATERSHED INCHES, 129.35 CFS-HRS, 10.69 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	179.84	(NULL)
1.31	113.51	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.15 WATERSHED INCHES, 345.07 CFS-HRS, 28.52 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	375.76	(NULL)
1.32	322.94	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.08 WATERSHED INCHES, 895.16 CFS-HRS, 73.98 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.88	364.59	(NULL)
1.40	322.83	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.08 WATERSHED INCHES, 894.97 CFS-HRS, 73.96 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	107.74	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.26 WATERSHED INCHES, 94.36 CFS-HRS, 7.80 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.85	447.87	(NULL)

1

RUNOFF VOLUME ABOVE BASEFLOW = 1.09 WATERSHED INCHES, 989.33 CFS-HRS, 81.76 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.99	428.70	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.09 WATERSHED INCHES, 989.37 CFS-HRS, 81.76 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	136.53	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.26 WATERSHED INCHES, 119.58 CFS-HRS, 9.88 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	511.51	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

.00	DISCHG	.00	.00	.00	.24	4.51	27.24	85.52	174.81	277.83	388.13
.83	DISCHG	471.04	507.76	505.33	484.78	461.98	444.25	432.74	424.95	417.73	408.75
1.66	DISCHG	396.80	382.43	367.88	355.28	345.10	335.56	323.90	308.66	289.37	266.08

2.49	DISCHG	241.98	220.07	201.80	186.88	174.42	163.62	153.85	144.76	136.15	127.93
3.32	DISCHG	120.09	112.69	105.79	99.44	93.66	88.45	83.78	79.62	75.91	72.61
4.15	DISCHG	69.66	67.02	64.64	62.48	60.51	58.71	57.04	55.49	54.05	52.69
4.98	DISCHG	51.42	50.21	49.06	47.97	46.92	45.92	44.96	44.04	43.15	42.27
5.81	DISCHG	41.36	40.35	39.19	37.85	36.34	34.67	32.90	31.04	29.15	27.27
6.64	DISCHG	25.42	23.63	21.91	20.28	18.75	17.31	15.98	14.74	13.60	12.54
7.47	DISCHG	11.58	10.69	9.88	9.14	8.46	7.84	7.27	6.75	6.28	5.85
8.30	DISCHG	5.45	5.09	4.75	4.45	4.17	3.91	3.67	3.45	3.25	3.06
9.13	DISCHG	2.89	2.73	2.58	2.44	2.31	2.19	2.07	1.97	1.87	1.77
9.96	DISCHG	1.69	1.61	1.53	1.46	1.39	1.32	1.26	1.20	1.15	1.10
10.79	DISCHG	1.04	1.00	.95	.91	.87	.83	.80	.76	.72	.69
11.62	DISCHG	.66	.63	.60	.58	.56	.53	.51	.49	.47	.45
12.45	DISCHG	.43	.41	.40	.38	.36	.35	.33	.32	.31	.29
13.28	DISCHG	.28	.27	.26	.25	.24	.23	.22	.21	.20	.19
14.11	DISCHG	.19	.18	.17	.16	.15	.15	.14	.14	.13	.13
14.94	DISCHG	.12	.12	.11	.10	.10	.10	.09	.09	.09	.08
15.77	DISCHG	.08	.07	.07	.07	.06	.06	.06	.06	.05	.05
16.60	DISCHG	.05	.05	.05	.05	.04	.04	.04	.04	.04	.03
17.43	DISCHG	.03	.03	.03	.03	.03	.03	.03	.02	.02	.02
18.26	DISCHG	.02	.02	.02	.02	.02	.02	.01	.01	.01	.01

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19.09	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = 1.11 WATERSHED INCHES, 1108.96 CFS-HRS, 91.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	190.79	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 125.56 CFS-HRS, 10.38 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.85	126.43	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 125.60 CFS-HRS, 10.38 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	139.91	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 93.17 CFS-HRS, 7.70 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.75	197.99	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 218.77 CFS-HRS, 18.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.08	150.43	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 218.80 CFS-HRS, 18.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.67	91.35	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 1.52 WATERSHED INCHES, 74.65 CFS-HRS, 6.17 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	80.69	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.17 WATERSHED INCHES, 61.24 CFS-HRS, 5.06 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	195.26	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.43 WATERSHED INCHES, 293.45 CFS-HRS, 24.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.38	198.66	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.38 WATERSHED INCHES, 354.65 CFS-HRS, 29.31 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.47	179.91	(RUNOFF)
1.21	46.06	(RUNOFF)
1.66	28.68	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.17 WATERSHED INCHES, 94.70 CFS-HRS, 7.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.49	187.44	(NULL)
1.26	241.56	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

.00	DISCHG	.00	.00	.00	.16	32.80	160.93	186.65	139.48	135.39	157.76
.83	DISCHG	179.19	198.57	215.22	227.53	236.15	241.48	238.48	230.28	224.66	220.08
1.66	DISCHG	214.99	206.85	199.16	190.31	178.26	157.66	141.81	131.91	121.71	110.95
2.49	DISCHG	100.07	89.43	79.24	69.64	60.72	52.56	45.19	38.60	32.79	27.70

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3.32	DISCHG	23.29	19.50	16.26	13.51	11.19	9.24	7.60	6.24	5.12	4.18
4.15	DISCHG	3.41	2.78	2.26	1.83	1.48	1.20	.97	.78	.63	.51
4.98	DISCHG	.41	.33	.26	.21	.17	.13	.11	.08	.07	.05
5.81	DISCHG	.04	.03	.03	.02	.01	.01	.01	.01	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 1.33 WATERSHED INCHES, 449.35 CFS-HRS, 37.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	720.75	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 2.07 SQ.MI.

.00	DISCHG	.00	.00	.00	.40	37.31	188.17	272.17	314.29	413.22	545.90
.83	DISCHG	650.23	706.33	720.55	712.32	698.13	685.73	671.22	655.23	642.39	628.83
1.66	DISCHG	611.79	589.28	567.03	545.59	523.36	493.22	465.71	440.57	411.08	377.04
2.49	DISCHG	342.05	309.50	281.04	256.51	235.15	216.18	199.04	183.37	168.94	155.63
3.32	DISCHG	143.38	132.19	122.05	112.95	104.85	97.68	91.38	85.86	81.03	76.79
4.15	DISCHG	73.07	69.80	66.90	64.31	62.00	59.91	58.01	56.27	54.68	53.20

4.98	DISCHG	51.82	50.53	49.32	48.17	47.09	46.05	45.06	44.12	43.21	42.32
5.81	DISCHG	41.40	40.38	39.21	37.87	36.35	34.69	32.90	31.05	29.15	27.27
6.64	DISCHG	25.42	23.63	21.91	20.28	18.75	17.31	15.98	14.74	13.60	12.54
7.47	DISCHG	11.58	10.69	9.88	9.14	8.46	7.84	7.27	6.75	6.28	5.85
8.30	DISCHG	5.45	5.09	4.75	4.45	4.17	3.91	3.67	3.45	3.25	3.06
9.13	DISCHG	2.89	2.73	2.58	2.44	2.31	2.19	2.07	1.97	1.87	1.77
9.96	DISCHG	1.69	1.61	1.53	1.46	1.39	1.32	1.26	1.20	1.15	1.10
10.79	DISCHG	1.04	1.00	.95	.91	.87	.83	.80	.76	.72	.69
11.62	DISCHG	.66	.63	.60	.58	.56	.53	.51	.49	.47	.45
12.45	DISCHG	.43	.41	.40	.38	.36	.35	.33	.32	.31	.29
13.28	DISCHG	.28	.27	.26	.25	.24	.23	.22	.21	.20	.19
14.11	DISCHG	.19	.18	.17	.16	.15	.15	.14	.14	.13	.13
14.94	DISCHG	.12	.12	.11	.10	.10	.10	.09	.09	.09	.08
15.77	DISCHG	.08	.07	.07	.07	.06	.06	.06	.06	.05	.05
16.60	DISCHG	.05	.05	.05	.05	.04	.04	.04	.04	.04	.03
17.43	DISCHG	.03	.03	.03	.03	.03	.03	.03	.02	.02	.02
18.26	DISCHG	.02	.02	.02	.02	.02	.02	.01	.01	.01	.01
19.09	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 1.16 WATERSHED INCHES, 1558.31 CFS-HRS, 128.78 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	253.61	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.59 WATERSHED INCHES, 229.41 CFS-HRS, 18.96 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.84	119.97	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.08 WATERSHED INCHES, 137.95 CFS-HRS, 11.40 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	95.41	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.14 WATERSHED INCHES, 99.25 CFS-HRS, 8.20 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.55	56.32	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.40 WATERSHED INCHES, 35.26 CFS-HRS, 2.91 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID

\+ COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL OPERATION ENDJOB RECORD ID

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID		STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 1 STORM 1														
XSECTION	44	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.01	---	6.14	139.43	1340.7
STRUCTURE	1	REACH	.10	7	2	.08	.0	4.50	24.00	2.01	64.53	6.47	88.86	854.4
XSECTION	45	RUNOFF	.08	7	2	.08	.0	4.50	24.00	2.01	---	6.08	128.75	1551.2
XSECTION	45	ADDHYD	.19	7	2	.08	.0	4.50	24.00	2.01	---	6.14	157.54	842.5
STRUCTURE	1	RUNOFF	.14	7	2	.08	.0	4.50	24.00	2.01	---	6.03	246.50	1825.9
STRUCTURE	1	ADDHYD	.32	7	2	.08	.0	4.50	24.00	2.01	64.90	6.05	389.76	1210.4
STRUCTURE	1	RESVOR	.32	7	2	.08	.0	4.50	24.00	2.01	64.78	6.25	261.61	812.5
STRUCTURE	2	RUNOFF	.06	7	2	.08	.0	4.50	24.00	2.42	---	6.06	125.96	1999.4
XSECTION	1	REACH	.32	7	2	.08	.0	4.50	24.00	2.00	---	6.60	140.30	435.7
XSECTION	2	REACH	.06	7	2	.08	.0	4.50	24.00	2.42	---	6.43	74.28	1179.0
XSECTION	1	RUNOFF	.12	7	2	.08	.0	4.50	24.00	1.82	---	6.13	146.16	1260.0
XSECTION	2	RUNOFF	.09	7	2	.08	.0	4.50	24.00	2.38	---	6.02	206.98	2225.6
STRUCTURE	3	ADDHYD	.44	7	2	.08	.0	4.50	24.00	1.95	85.50	6.37	187.66	428.4
STRUCTURE	3	RESVOR	.44	7	2	.08	.0	4.50	24.00	1.95	85.37	6.48	183.49	418.9
XSECTION	3	ADDHYD	.16	7	2	.08	.0	4.50	24.00	2.40	---	6.03	219.51	1407.1
XSECTION	3	REACH	.44	7	2	.08	.0	4.50	24.00	1.95	---	6.62	180.36	411.8
XSECTION	3	ADDHYD	.59	7	2	.08	.0	4.50	24.00	2.07	---	6.07	299.93	504.9
XSECTION	3	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.37	---	5.96	239.32	2393.2
STRUCTURE	4	ADDHYD	.69	7	2	.08	.0	4.50	24.00	2.11	44.09	6.00	488.80	704.3
STRUCTURE	99	RESVOR	.69	7	2	.08	.0	4.50	24.00	2.11	---	6.00	488.80	704.3
XSECTION	4	REACH	.69	7	2	.08	.0	4.50	24.00	2.11	---	6.15	392.18	565.1
XSECTION	4	RUNOFF	.07	7	2	.08	.0	4.50	24.00	1.75	---	6.03	111.41	1638.3
XSECTION	5	RUNOFF	.06	7	2	.08	.0	4.50	24.00	2.22	---	6.03	126.61	2075.7
XSECTION	5	ADDHYD	.76	7	2	.08	.0	4.50	24.00	2.08	---	6.11	466.34	612.0
XSECTION	5	ADDHYD	.82	7	2	.08	.0	4.50	24.00	2.09	---	6.08	579.57	704.2
XSECTION	7	REACH	.82	7	2	.08	.0	4.50	24.00	2.08	---	6.21	514.60	625.3
XSECTION	46	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.13	---	6.06	179.45	1759.3
STRUCTURE	5	RUNOFF	.17	7	2	.08	.0	4.50	24.00	2.13	---	6.12	255.55	1512.2
STRUCTURE	5	ADDHYD	.27	7	2	.08	.0	4.50	24.00	2.13	73.42	6.09	427.32	1576.8
STRUCTURE	5	RESVOR	.27	7	2	.08	.0	4.50	24.00	2.10	70.91	6.58	83.44	307.9
XSECTION	61	RUNOFF	.03	7	2	.08	.0	4.50	24.00	2.92	---	5.97	91.81	2700.3
XSECTION	61	ADDHYD	.31	7	2	.08	.0	4.50	24.00	2.19	---	6.03	124.76	409.1

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID		STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 1 STORM 1														
XSECTION	6	REACH	.31	7	2	.08	.0	4.50	24.00	2.18	---	6.75	88.24	289.3
XSECTION	6	RUNOFF	.16	7	2	.08	.0	4.50	24.00	2.55	---	6.11	294.47	1852.0
XSECTION	7	ADDHYD	.46	7	2	.08	.0	4.50	24.00	2.31	---	6.13	372.37	802.5
XSECTION	7	ADDHYD	1.29	7	2	.08	.0	4.50	24.00	2.16	---	6.17	868.56	674.9
XSECTION	8	REACH	1.29	7	2	.08	.0	4.50	24.00	2.16	---	6.27	852.11	662.1
XSECTION	8	RUNOFF	.12	7	2	.08	.0	4.50	24.00	2.55	---	6.11	214.83	1852.0
XSECTION	8	ADDHYD	1.40	7	2	.08	.0	4.50	24.00	2.19	---	6.24	1019.70	726.8
XSECTION	9	REACH	1.40	7	2	.08	.0	4.50	24.00	2.19	---	6.35	989.31	705.1
XSECTION	9	RUNOFF	.15	7	2	.08	.0	4.50	24.00	2.55	---	6.11	272.24	1852.0
XSECTION	9	ADDHYD	1.55	7	2	.08	.0	4.50	24.00	2.23	---	6.31	1139.83	735.4
STRUCTURE	21	RUNOFF	.14	7	2	.08	.0	4.50	24.00	2.82	---	6.03	340.56	2450.1

STRUCTURE 20	REACH	.14	7	2	.08	.0	4.50	24.00	2.81	---	6.26	269.60	1939.6
STRUCTURE 20	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.81	---	6.04	248.16	2409.3
STRUCTURE 20	ADDHYD	.24	7	2	.08	.0	4.50	24.00	2.81	---	6.12	422.48	1745.8
XSECTION 21	REACH	.24	7	2	.08	.0	4.50	24.00	2.81	---	6.36	325.31	1344.2
XSECTION 21	RUNOFF	.08	7	2	.08	.0	4.50	24.00	3.10	---	6.09	173.63	2284.7
XSECTION 24	RUNOFF	.08	7	2	.08	.0	4.50	24.00	2.37	---	6.06	158.34	1954.8
STRUCTURE 21	ADDHYD	.32	7	2	.08	.0	4.50	24.00	2.88	---	6.23	434.94	1367.7
STRUCTURE 21	ADDHYD	.40	7	2	.08	.0	4.50	24.00	2.78	---	6.15	555.10	1391.2
XSECTION 22	REACH	.40	7	2	.08	.0	4.50	24.00	2.77	---	6.47	414.96	1040.0
XSECTION 22	RUNOFF	.13	7	2	.08	.0	4.50	24.00	2.37	---	5.96	299.15	2393.2
XSECTION 23	ADDHYD	.52	7	2	.08	.0	4.50	24.00	2.68	---	6.46	442.81	845.1
XSECTION 50	ADDHYD	2.07	7	2	.08	.0	4.50	24.00	2.34	---	6.33	1559.49	751.9
XSECTION 40	RUNOFF	.22	7	2	.08	.0	4.50	24.00	3.27	---	6.13	504.79	2253.5
XSECTION 41	RUNOFF	.20	7	2	.08	.0	4.50	24.00	2.19	---	6.21	252.30	1274.2
XSECTION 42	RUNOFF	.14	7	2	.08	.0	4.50	24.00	2.31	---	6.16	200.03	1481.7
XSECTION 43	RUNOFF	.04	7	2	.08	.0	4.50	24.00	2.81	---	6.02	98.14	2516.5

ALTERNATE 1 STORM 2

XSECTION 44	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.06	---	6.16	69.48	668.1
STRUCTURE 1	REACH	.10	7	2	.08	.0	3.20	24.00	1.06	64.06	6.59	39.73	382.0
XSECTION 45	RUNOFF	.08	7	2	.08	.0	3.20	24.00	1.06	---	6.10	65.05	783.8
XSECTION 45	ADDHYD	.19	7	2	.08	.0	3.20	24.00	1.06	---	6.12	68.85	368.2
STRUCTURE 1	RUNOFF	.14	7	2	.08	.0	3.20	24.00	1.07	---	6.04	128.26	950.1
STRUCTURE 1	ADDHYD	.32	7	2	.08	.0	3.20	24.00	1.06	64.72	6.06	192.64	598.3
STRUCTURE 1	RESVOR	.32	7	2	.08	.0	3.20	24.00	1.06	63.67	7.20	33.67	104.6
STRUCTURE 2	RUNOFF	.06	7	2	.08	.0	3.20	24.00	1.37	---	6.07	69.95	1110.3

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A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)

ALTERNATE 1 STORM 2

XSECTION 1	REACH	.32	7	2	.08	.0	3.20	24.00	1.05	---	7.98	32.90	102.2
XSECTION 2	REACH	.06	7	2	.08	.0	3.20	24.00	1.37	---	6.47	36.76	583.5
XSECTION 1	RUNOFF	.12	7	2	.08	.0	3.20	24.00	.93	---	6.15	69.60	600.0
XSECTION 2	RUNOFF	.09	7	2	.08	.0	3.20	24.00	1.34	---	6.03	116.82	1256.2
STRUCTURE 3	ADDHYD	.44	7	2	.08	.0	3.20	24.00	1.02	81.90	6.16	81.00	184.9
STRUCTURE 3	RESVOR	.44	7	2	.08	.0	3.20	24.00	1.02	81.90	6.17	80.86	184.6
XSECTION 3	ADDHYD	.16	7	2	.08	.0	3.20	24.00	1.35	---	6.04	120.95	775.3
XSECTION 3	REACH	.44	7	2	.08	.0	3.20	24.00	1.02	---	6.33	71.13	162.4
XSECTION 3	ADDHYD	.59	7	2	.08	.0	3.20	24.00	1.11	---	6.07	146.31	246.3
XSECTION 3	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.34	---	5.96	136.48	1364.8
STRUCTURE 4	ADDHYD	.69	7	2	.08	.0	3.20	24.00	1.14	41.79	6.00	259.06	373.3
STRUCTURE 99	RESVOR	.69	7	2	.08	.0	3.20	24.00	1.14	---	6.00	259.06	373.3
XSECTION 4	REACH	.69	7	2	.08	.0	3.20	24.00	1.14	---	6.24	190.26	274.1
XSECTION 4	RUNOFF	.07	7	2	.08	.0	3.20	24.00	.88	---	6.04	54.61	803.1
XSECTION 5	RUNOFF	.06	7	2	.08	.0	3.20	24.00	1.21	---	6.03	69.29	1135.9
XSECTION 5	ADDHYD	.76	7	2	.08	.0	3.20	24.00	1.11	---	6.21	206.62	271.2
XSECTION 5	ADDHYD	.82	7	2	.08	.0	3.20	24.00	1.12	---	6.12	239.38	290.9
XSECTION 7	REACH	.82	7	2	.08	.0	3.20	24.00	1.12	---	6.32	214.38	260.5
XSECTION 46	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.15	---	6.07	94.05	922.0
STRUCTURE 5	RUNOFF	.17	7	2	.08	.0	3.20	24.00	1.15	---	6.14	131.84	780.1
STRUCTURE 5	ADDHYD	.27	7	2	.08	.0	3.20	24.00	1.15	71.95	6.11	220.87	815.0
STRUCTURE 5	RESVOR	.27	7	2	.08	.0	3.20	24.00	1.13	70.45	6.63	41.62	153.6
XSECTION 61	RUNOFF	.03	7	2	.08	.0	3.20	24.00	1.76	---	5.99	56.34	1657.0
XSECTION 61	ADDHYD	.31	7	2	.08	.0	3.20	24.00	1.20	---	6.03	70.92	232.5
XSECTION 6	REACH	.31	7	2	.08	.0	3.20	24.00	1.20	---	6.79	44.74	146.7

XSECTION	6	RUNOFF	.16	7	2	.08	.0	3.20	24.00	1.47	---	6.12	165.08	1038.2
XSECTION	7	ADDHYD	.46	7	2	.08	.0	3.20	24.00	1.29	---	6.14	205.44	442.8
XSECTION	7	ADDHYD	1.29	7	2	.08	.0	3.20	24.00	1.18	---	6.20	386.72	300.5
XSECTION	8	REACH	1.29	7	2	.08	.0	3.20	24.00	1.18	---	6.32	379.56	294.9
XSECTION	8	RUNOFF	.12	7	2	.08	.0	3.20	24.00	1.47	---	6.12	120.44	1038.2
XSECTION	8	ADDHYD	1.40	7	2	.08	.0	3.20	24.00	1.20	---	6.26	464.61	331.2
XSECTION	9	REACH	1.40	7	2	.08	.0	3.20	24.00	1.20	---	6.40	443.50	316.1
XSECTION	9	RUNOFF	.15	7	2	.08	.0	3.20	24.00	1.47	---	6.12	152.62	1038.2
XSECTION	9	ADDHYD	1.55	7	2	.08	.0	3.20	24.00	1.23	---	6.34	519.64	335.3
STRUCTURE	21	RUNOFF	.14	7	2	.08	.0	3.20	24.00	1.68	---	6.04	203.38	1463.1
STRUCTURE	20	REACH	.14	7	2	.08	.0	3.20	24.00	1.68	---	6.29	149.95	1078.7

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A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 1 STORM 2													
STRUCTURE 20	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.68	---	6.05	147.77	1434.7
STRUCTURE 20	ADDHYD	.24	7	2	.08	.0	3.20	24.00	1.68	---	6.13	235.16	971.7
XSECTION 21	REACH	.24	7	2	.08	.0	3.20	24.00	1.68	---	6.49	172.11	711.2
XSECTION 21	RUNOFF	.08	7	2	.08	.0	3.20	24.00	1.91	---	6.10	106.41	1400.1
XSECTION 24	RUNOFF	.08	7	2	.08	.0	3.20	24.00	1.34	---	6.07	87.10	1075.3
STRUCTURE 21	ADDHYD	.32	7	2	.08	.0	3.20	24.00	1.73	---	6.32	211.55	665.3
STRUCTURE 21	ADDHYD	.40	7	2	.08	.0	3.20	24.00	1.65	---	6.17	267.29	669.9
XSECTION 22	REACH	.40	7	2	.08	.0	3.20	24.00	1.65	---	6.63	200.14	501.6
XSECTION 22	RUNOFF	.13	7	2	.08	.0	3.20	24.00	1.34	---	5.96	170.61	1364.8
XSECTION 23	ADDHYD	.52	7	2	.08	.0	3.20	24.00	1.58	---	6.00	214.18	408.7
XSECTION 50	ADDHYD	2.07	7	2	.08	.0	3.20	24.00	1.32	---	6.37	710.12	342.4
XSECTION 40	RUNOFF	.22	7	2	.08	.0	3.20	24.00	2.06	---	6.14	314.34	1403.3
XSECTION 41	RUNOFF	.20	7	2	.08	.0	3.20	24.00	1.19	---	6.23	129.61	654.6
XSECTION 42	RUNOFF	.14	7	2	.08	.0	3.20	24.00	1.28	---	6.18	105.81	783.7
XSECTION 43	RUNOFF	.04	7	2	.08	.0	3.20	24.00	1.68	---	6.03	58.94	1511.3
ALTERNATE 2 STORM 1													
XSECTION 44	RUNOFF	.10	8	3	.08	.0	3.05	2.00	1.84	---	.82	153.57	1476.6
STRUCTURE 1	REACH	.10	8	3	.08	.0	3.05	2.00	1.84	64.56	1.15	103.27	992.9
XSECTION 45	RUNOFF	.08	8	3	.08	.0	3.05	2.00	1.84	---	.74	141.86	1709.2
XSECTION 45	ADDHYD	.19	8	3	.08	.0	3.05	2.00	1.84	---	.86	188.63	1008.7
STRUCTURE 1	RUNOFF	.14	8	3	.08	.0	3.05	2.00	1.84	---	.65	274.75	2035.2
STRUCTURE 1	ADDHYD	.32	8	3	.08	.0	3.05	2.00	1.84	64.94	.69	429.92	1335.2
STRUCTURE 1	RESVOR	.32	8	3	.08	.0	3.05	2.00	1.84	64.87	.94	359.57	1116.7
STRUCTURE 2	RUNOFF	.06	8	3	.08	.0	3.05	2.00	2.09	---	.70	132.93	2110.0
XSECTION 1	REACH	.32	8	3	.08	.0	3.05	2.00	1.84	---	1.30	238.37	740.3
XSECTION 2	REACH	.06	8	3	.08	.0	3.05	2.00	2.09	---	1.09	76.05	1207.1
XSECTION 1	RUNOFF	.12	8	3	.08	.0	3.05	2.00	1.72	---	.79	167.30	1442.2
XSECTION 2	RUNOFF	.09	8	3	.08	.0	3.05	2.00	2.07	---	.62	230.66	2480.2
STRUCTURE 3	ADDHYD	.44	8	3	.08	.0	3.05	2.00	1.81	92.39	1.20	320.27	731.2
STRUCTURE 3	RESVOR	.44	8	3	.08	.0	3.05	2.00	1.81	89.27	1.48	265.57	606.3
XSECTION 3	ADDHYD	.16	8	3	.08	.0	3.05	2.00	2.08	---	.64	230.44	1477.2
XSECTION 3	REACH	.44	8	3	.08	.0	3.05	2.00	1.81	---	1.61	264.26	603.3
XSECTION 3	ADDHYD	.59	8	3	.08	.0	3.05	2.00	1.88	---	1.19	358.48	603.5
XSECTION 3	RUNOFF	.10	8	3	.08	.0	3.05	2.00	2.05	---	.55	284.34	2843.4
STRUCTURE 4	ADDHYD	.69	8	3	.08	.0	3.05	2.00	1.90	44.14	.60	518.77	747.5
STRUCTURE 99	RESVOR	.69	8	3	.08	.0	3.05	2.00	1.90	---	.60	518.77	747.5

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 2 STORM 1													
XSECTION 4	REACH	.69	8	3	.08	.0	3.05	2.00	1.90	---	1.20	412.49	594.4
XSECTION 4	RUNOFF	.07	8	3	.08	.0	3.05	2.00	1.68	---	.64	126.90	1866.1
XSECTION 5	RUNOFF	.06	8	3	.08	.0	3.05	2.00	1.96	---	.63	138.11	2264.1
XSECTION 5	ADDHYD	.76	8	3	.08	.0	3.05	2.00	1.88	---	.79	473.65	621.6
XSECTION 5	ADDHYD	.82	8	3	.08	.0	3.05	2.00	1.89	---	.71	575.80	699.6
XSECTION 7	REACH	.82	8	3	.08	.0	3.05	2.00	1.89	---	.94	533.86	648.7
XSECTION 46	RUNOFF	.10	8	3	.08	.0	3.05	2.00	1.91	---	.70	196.36	1925.1
STRUCTURE 5	RUNOFF	.17	8	3	.08	.0	3.05	2.00	1.91	---	.78	277.48	1641.9
STRUCTURE 5	ADDHYD	.27	8	3	.08	.0	3.05	2.00	1.91	73.61	.75	458.30	1691.2
STRUCTURE 5	RESVOR	.27	8	3	.08	.0	3.05	2.00	1.91	71.10	1.49	105.11	387.9
XSECTION 61	RUNOFF	.03	8	3	.08	.0	3.05	2.00	2.40	---	.58	111.30	3273.5
XSECTION 61	ADDHYD	.31	8	3	.08	.0	3.05	2.00	1.97	---	.60	123.92	406.3
XSECTION 6	REACH	.31	8	3	.08	.0	3.05	2.00	1.96	---	1.70	111.83	366.6
XSECTION 6	RUNOFF	.16	8	3	.08	.0	3.05	2.00	2.17	---	.77	304.65	1916.0
XSECTION 7	ADDHYD	.46	8	3	.08	.0	3.05	2.00	2.04	---	.78	374.77	807.7
XSECTION 7	ADDHYD	1.29	8	3	.08	.0	3.05	2.00	1.94	---	.86	881.77	685.1
XSECTION 8	REACH	1.29	8	3	.08	.0	3.05	2.00	1.94	---	.95	876.10	680.7
XSECTION 8	RUNOFF	.12	8	3	.08	.0	3.05	2.00	2.17	---	.77	222.26	1916.0
XSECTION 8	ADDHYD	1.40	8	3	.08	.0	3.05	2.00	1.96	---	.92	1048.99	747.7
XSECTION 9	REACH	1.40	8	3	.08	.0	3.05	2.00	1.96	---	1.04	1021.11	727.8
XSECTION 9	RUNOFF	.15	8	3	.08	.0	3.05	2.00	2.17	---	.77	281.66	1916.0
XSECTION 9	ADDHYD	1.55	8	3	.08	.0	3.05	2.00	1.98	---	1.01	1209.94	780.6
STRUCTURE 21	RUNOFF	.14	8	3	.08	.0	3.05	2.00	2.34	---	.66	358.56	2579.6
STRUCTURE 20	REACH	.14	8	3	.08	.0	3.05	2.00	2.34	---	.85	262.37	1887.6
STRUCTURE 20	RUNOFF	.10	8	3	.08	.0	3.05	2.00	2.34	---	.67	260.14	2525.6
STRUCTURE 20	ADDHYD	.24	8	3	.08	.0	3.05	2.00	2.34	---	.76	463.16	1913.9
XSECTION 21	REACH	.24	8	3	.08	.0	3.05	2.00	2.34	---	1.03	347.21	1434.7
XSECTION 21	RUNOFF	.08	8	3	.08	.0	3.05	2.00	2.48	---	.76	169.88	2235.3
XSECTION 24	RUNOFF	.08	8	3	.08	.0	3.05	2.00	2.06	---	.70	167.76	2071.1
STRUCTURE 21	ADDHYD	.32	8	3	.08	.0	3.05	2.00	2.37	---	.94	461.41	1451.0
STRUCTURE 21	ADDHYD	.40	8	3	.08	.0	3.05	2.00	2.31	---	.86	573.94	1438.5
XSECTION 22	REACH	.40	8	3	.08	.0	3.05	2.00	2.31	---	1.23	458.70	1149.6
XSECTION 22	RUNOFF	.13	8	3	.08	.0	3.05	2.00	2.05	---	.55	355.42	2843.4
XSECTION 23	ADDHYD	.52	8	3	.08	.0	3.05	2.00	2.25	---	1.11	529.95	1011.3
XSECTION 50	ADDHYD	2.07	8	3	.08	.0	3.05	2.00	2.05	---	1.04	1714.64	826.7
XSECTION 40	RUNOFF	.22	8	3	.08	.0	3.05	2.00	2.55	---	.81	464.19	2072.3

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 2 STORM 1													

XSECTION 41	RUNOFF	.20	8	3	.08	.0	3.05	2.00	1.95	---	.92	272.12	1374.4
XSECTION 42	RUNOFF	.14	8	3	.08	.0	3.05	2.00	2.02	---	.86	208.05	1541.1
XSECTION 43	RUNOFF	.04	8	3	.08	.0	3.05	2.00	2.34	---	.64	104.41	2677.2
ALTERNATE 2	STORM 2												
XSECTION 44	RUNOFF	.10	9	3	.08	.0	2.06	2.00	.99	---	.74	65.36	628.4
STRUCTURE 1	REACH	.10	9	3	.08	.0	2.06	2.00	.99	64.06	1.16	40.05	385.1
XSECTION 45	RUNOFF	.08	9	3	.08	.0	2.06	2.00	.99	---	.65	61.82	744.8
XSECTION 45	ADDHYD	.19	9	3	.08	.0	2.06	2.00	.99	---	.72	75.39	403.1
STRUCTURE 1	RUNOFF	.14	9	3	.08	.0	2.06	2.00	.99	---	.57	123.74	916.6
STRUCTURE 1	ADDHYD	.32	9	3	.08	.0	2.06	2.00	.99	64.71	.60	187.51	582.3
STRUCTURE 1	RESVOR	.32	9	3	.08	.0	2.06	2.00	.99	64.51	1.84	79.08	245.6
STRUCTURE 2	RUNOFF	.06	9	3	.08	.0	2.06	2.00	1.20	---	.61	64.70	1027.0
XSECTION 1	REACH	.32	9	3	.08	.0	2.06	2.00	.99	---	2.22	68.66	213.2
XSECTION 2	REACH	.06	9	3	.08	.0	2.06	2.00	1.20	---	1.11	32.16	510.5
XSECTION 1	RUNOFF	.12	9	3	.08	.0	2.06	2.00	.91	---	.71	67.53	582.1
XSECTION 2	RUNOFF	.09	9	3	.08	.0	2.06	2.00	1.17	---	.54	113.65	1222.1
STRUCTURE 3	ADDHYD	.44	9	3	.08	.0	2.06	2.00	.97	82.17	2.03	88.42	201.9
STRUCTURE 3	RESVOR	.44	9	3	.08	.0	2.06	2.00	.97	82.17	2.04	88.43	201.9
XSECTION 3	ADDHYD	.16	9	3	.08	.0	2.06	2.00	1.18	---	.54	113.83	729.6
XSECTION 3	REACH	.44	9	3	.08	.0	2.06	2.00	.97	---	2.18	87.01	198.7
XSECTION 3	ADDHYD	.59	9	3	.08	.0	2.06	2.00	1.03	---	.97	136.42	229.7
XSECTION 3	RUNOFF	.10	9	3	.08	.0	2.06	2.00	1.17	---	.47	143.93	1439.3
STRUCTURE 4	ADDHYD	.69	9	3	.08	.0	2.06	2.00	1.05	41.55	.51	251.52	362.4
STRUCTURE 99	RESVOR	.69	9	3	.08	.0	2.06	2.00	1.05	---	.51	251.52	362.4
XSECTION 4	REACH	.69	9	3	.08	.0	2.06	2.00	1.05	---	1.20	168.56	242.9
XSECTION 4	RUNOFF	.07	9	3	.08	.0	2.06	2.00	.87	---	.57	53.12	781.1
XSECTION 5	RUNOFF	.06	9	3	.08	.0	2.06	2.00	1.09	---	.55	65.18	1068.6
XSECTION 5	ADDHYD	.76	9	3	.08	.0	2.06	2.00	1.03	---	.68	194.56	255.3
XSECTION 5	ADDHYD	.82	9	3	.08	.0	2.06	2.00	1.04	---	.62	251.78	305.9
XSECTION 7	REACH	.82	9	3	.08	.0	2.06	2.00	1.04	---	.88	211.07	256.5
XSECTION 46	RUNOFF	.10	9	3	.08	.0	2.06	2.00	1.05	---	.61	89.83	880.7
STRUCTURE 5	RUNOFF	.17	9	3	.08	.0	2.06	2.00	1.05	---	.70	122.14	722.7
STRUCTURE 5	ADDHYD	.27	9	3	.08	.0	2.06	2.00	1.05	71.82	.66	203.20	749.8
STRUCTURE 5	RESVOR	.27	9	3	.08	.0	2.06	2.00	1.05	70.59	2.02	54.43	200.9
XSECTION 61	RUNOFF	.03	9	3	.08	.0	2.06	2.00	1.45	---	.50	62.75	1845.5
XSECTION 61	ADDHYD	.31	9	3	.08	.0	2.06	2.00	1.10	---	.51	67.09	220.0

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
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A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 2	STORM 2												
XSECTION 6	REACH	.31	9	3	.08	.0	2.06	2.00	1.10	---	2.07	60.65	198.8
XSECTION 6	RUNOFF	.16	9	3	.08	.0	2.06	2.00	1.26	---	.68	147.68	928.8
XSECTION 7	ADDHYD	.46	9	3	.08	.0	2.06	2.00	1.15	---	.69	179.84	387.6
XSECTION 7	ADDHYD	1.29	9	3	.08	.0	2.06	2.00	1.08	---	.77	375.76	292.0
XSECTION 8	REACH	1.29	9	3	.08	.0	2.06	2.00	1.08	---	.88	364.59	283.3
XSECTION 8	RUNOFF	.12	9	3	.08	.0	2.06	2.00	1.26	---	.68	107.74	928.8
XSECTION 8	ADDHYD	1.40	9	3	.08	.0	2.06	2.00	1.09	---	.85	447.87	319.2
XSECTION 9	REACH	1.40	9	3	.08	.0	2.06	2.00	1.09	---	.99	428.70	305.6
XSECTION 9	RUNOFF	.15	9	3	.06	.0	2.06	2.00	1.26	---	.68	136.53	928.8
XSECTION 9	ADDHYD	1.55	9	3	.08	.0	2.06	2.00	1.11	---	.95	511.51	330.0
STRUCTURE 21	RUNOFF	.14	9	3	.08	.0	2.06	2.00	1.40	---	.58	190.79	1372.6
STRUCTURE 20	REACH	.14	9	3	.08	.0	2.06	2.00	1.40	---	.85	126.43	909.6
STRUCTURE 20	RUNOFF	.10	9	3	.08	.0	2.06	2.00	1.40	---	.58	139.91	1358.3

STRUCTURE	20	ADDHYD	.24	9	3	.08	.0	2.06	2.00	1.40	---	.75	197.99	818.1
XSECTION	21	REACH	.24	9	3	.08	.0	2.06	2.00	1.40	---	1.08	150.43	621.6
XSECTION	21	RUNOFF	.08	9	3	.08	.0	2.06	2.00	1.52	---	.67	91.35	1202.0
XSECTION	24	RUNOFF	.08	9	3	.08	.0	2.06	2.00	1.17	---	.61	80.69	996.2
STRUCTURE	21	ADDHYD	.32	9	3	.08	.0	2.06	2.00	1.43	---	.95	195.26	614.0
STRUCTURE	21	ADDHYD	.40	9	3	.08	.0	2.06	2.00	1.38	---	.75	243.16	609.4
XSECTION	22	REACH	.40	9	3	.08	.0	2.06	2.00	1.38	---	1.38	198.66	497.9
XSECTION	22	RUNOFF	.13	9	3	.08	.0	2.06	2.00	1.17	---	.47	179.91	1439.3
XSECTION	23	ADDHYD	.52	9	3	.08	.0	2.06	2.00	1.33	---	1.26	241.56	461.0
XSECTION	50	ADDHYD	2.07	9	3	.08	.0	2.06	2.00	1.16	---	1.01	720.75	347.5
XSECTION	40	RUNOFF	.22	9	3	.08	.0	2.06	2.00	1.59	---	.72	253.61	1132.2
XSECTION	41	RUNOFF	.20	9	3	.08	.0	2.06	2.00	1.08	---	.84	119.97	605.9
XSECTION	42	RUNOFF	.14	9	3	.08	.0	2.06	2.00	1.14	---	.77	95.41	706.7
XSECTION	43	RUNOFF	.04	9	3	.08	.0	2.06	2.00	1.40	---	.55	56.32	1444.0

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SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

		HYDROGRAPH INFORMATION							ROUTING PARAMETERS									PEAK	
						OUTFLOW+			VOLUME	MAIN	ITER-	Q AND A			PEAK	S/Q	ATT-	TRAVEL TIME	
XSEC	REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION		LENGTH	RATIO	*PEAK	KIN	STOR-	KINE-
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	FLOW (CFS)	BASE (IN)	INCR (HR)	#	COEFF (X)	POWER (M)	FACTOR (K*)	O/I (Q*)	(K) (SEC)	COEFF (C)	AGE (HR)	MATIC (HR)
ALTERNATE 1 STORM 1																			
												.500							
0	3300	139	6.1	89	6.5			0	2.01	.08	1		1.33	.365	.637	1227	.22	.25	.36
						---	---												
												.500							
1	3000	251	6.2	140	6.6			0	2.01	.08	1		1.33	.128	.557	964	.27	.41	.29
						---	---												
												.500							
2	3400	126	6.1	74	6.5			0	2.42	.08	1		1.33	.521	.584	1297	.21	.25	.38
						---	---												
												.500							
3	1000	183	6.5	180	6.6			0	1.95	.08	1		1.33	.015	.982	347	.60	.17	.10
						299	6.1												
												.500							
4	2300	483	6.0	392	6.1			0	2.11	.08	1		1.33	.059	.812	629	.38	.17	.18
						---	---												
												.500							
7	1500	576	6.1	514	6.2			0	2.09	.08	1		1.33	.032	.892	392	.55	.17	.11
						---	---												
												.500							
6	2700	122	6.1	88	6.7			0	2.19	.08	1		1.33	.052	.721	1037	.25	.66	.30
						---	---												
												.500							
8	800	858	6.1	840	6.3			0	2.16	.08	1		1.33	.011	.979	190	.88?	.17	.05
						1017	6.2												
												.500							
9	1100	1017	6.2	975	6.3			0	2.19	.08	1		1.33	.017	.958	250	.75?	.08	.07
						1140	6.3												
												.500							
0	2200	336	6.1	265	6.2			0	2.82	.08	1		1.33	.223	.787	658	.37	.08	.19
						420	6.1												
												.500							
21	3200	420	6.1	324	6.4			0	2.81	.08	1		1.33	.219	.772	905	.28	.25	.26
						---	---												
												.500							
22	4000	555	6.1	415	6.5			0	2.78	.08	1		1.33	.204	.748	1056	.25	.33	.30
						---	---												

ALTERNATE 1 STORM 2

0	3300	69	6.1	39	6.6			0	1.06	.08	1	.500	1.33	.421	.570	1461	.19	.25	.43
						---	---												
1	3000	34	7.2	33	8.0			0	1.06	.08	1	.500	1.33	.041	.977	1587	.17	.75	.44
						---	---												
2	3400	70	6.1	37	6.5			0	1.37	.08	1	.500	1.33	.614	.526	1501	.18	.25	.45
						---	---												
3	1000	80	6.1	71	6.3			0	1.02	.08	1	.500	1.33	.015	.890	427	.52	.17	.12
						146	6.1												
4	2300	255	6.0	189	6.2			0	1.14	.08	1	.500	1.33	.070	.742	736	.34	.17	.21
						---	---												
7	1500	239	6.1	214	6.3			0	1.12	.08	1	.500	1.33	.030	.897	488	.47	.17	.14
						---	---												
6	2700	69	6.1	45	6.8			0	1.20	.08	1	.500	1.33	.066	.648	1195	.22	.75	.35
						---	---												
8	800	386	6.2	379	6.3			0	1.18	.08	1	.500	1.33	.011	.984	231	.797	.08	.06
						458	6.2												
9	1100	458	6.2	443	6.4			0	1.20	.08	1	.500	1.33	.017	.967	304	.66	.17	.08
						517	6.3												
0	2200	202	6.1	149	6.3			0	1.68	.08	1	.500	1.33	.266	.737	746	.33	.17	.21
						235	6.1												
21	3200	235	6.1	172	6.5			0	1.68	.08	1	.500	1.33	.243	.732	1046	.25	.25	.30
						---	---												
22	4000	266	6.1	200	6.6			0	1.65	.08	1	.500	1.33	.195	.752	1267	.21	.50	.36
						---	---												

ALTERNATE 2 STORM 1

0	3300	153	.8	103	1.2			0	1.84	.08	1	.500	1.33	.453	.673	1198	.22	.33	.35
						---	---												
1	3000	351	.9	238	1.3			0	1.84	.08	1	.500	1.33	.203	.677	887	.29	.41	.26
						---	---												
2	3400	130	.7	76	1.1			0	2.09	.08	1	.500	1.33	.653	.585	1287	.21	.33	.38
						---	---												
3	1000	266	1.5	264	1.6			0	1.81	.08	1	.500	1.33	.024	.994	317	.64	.08	.09
						358	1.2												
4	2300	514	.6	412	1.2			0	1.90	.08	1	.500	1.33	.072	.801	619	.39	.58	.18
						---	---												

1

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

XSEC ID	REACH LENGTH (FT)	HYDROGRAPH INFORMATION: INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	OUTFLOW+ INTERV.AREA PEAK (CFS)	INTERV.AREA TIME (HR)	BASE-FLOW (CFS)	ROUTING PARAMETERS: VOLUME ABOVE BASE (IN)	MAIN TIME INCR (HR)	ITER-ATION #	Q AND A EQUATION COEFF (X)	Q AND A EQUATION POWER (M)	LENGTH FACTOR (X*)	PEAK RATIO O/I (Q*)	S/Q *PEAK (K) (SEC)	ATT-KIN COEFF (C)	PEAK TRAVEL TIME STOR-AGE (HR)	PEAK TRAVEL TIME KINE-MATIC (HR)

ALTERNATE 2 STORM 1

+	7	1500	574	.7	533	.9			0	1.89	.08	1	.500	1.33	.036	.929	393	.55	.17	.11
+							---	---												
+	6	2700	122	.6	112	1.7			0	1.97	.08	1	.500	1.33	.060	.913	1037	.25	1.08	.29
+							---	---												
+	8	800	878	.8	866	.9			0	1.94	.08	1	.500	1.33	.013	.987	188	.88?	.08	.05
+							1048	.9												
+	9	1100	1048	.9	1016	1.1			0	1.96	.08	1	.500	1.33	.021	.969	248	.75?	.17	.07
+							1208	1.0												
+	0	2200	359	.7	261	.8			0	2.34	.08	1	.500	1.33	.304	.729	647	.38	.17	.19
+							463	.7												
+	21	3200	463	.7	346	1.0			0	2.34	.08	1	.500	1.33	.309	.747	884	.29	.25	.25
+							---	---												
+	22	4000	571	.8	459	1.2			0	2.31	.08	1	.500	1.33	.268	.803	1049	.25	.41	.30
+							---	---												

ALTERNATE 2 STORM 2

+	0	3300	65	.7	40	1.2			0	.99	.08	1	.500	1.33	.436	.613	1481	.18	.41	.44
+							---	---												
+	1	3000	79	1.8	69	2.2			0	.99	.08	1	.500	1.33	.103	.869	1285	.21	.41	.36
+							---	---												
+	2	3400	63	.6	32	1.1			0	1.20	.08	1	.500	1.33	.669	.507	1538	.18	.33	.46
+							---	---												
+	3	1000	88	2.1	87	2.2			0	.97	.08	1	.500	1.33	.018	.985	417	.53	.08	.12
+							136	1.0												
+	4	2300	251	.5	168	1.2			0	1.05	.08	1	.500	1.33	.077	.672	740	.34	.66	.22
+							---	---												
+	7	1500	245	.6	211	.9			0	1.04	.08	1	.500	1.33	.035	.862	485	.47	.33	.14
+							---	---												
+	6	2700	67	.5	61	2.1			0	1.10	.08	1	.500	1.33	.072	.909	1206	.22	1.58	.34
+							---	---												
+	8	800	375	.7	363	.9			0	1.08	.08	1	.500	1.33	.012	.970	233	.78?	.17	.06
+							447	.8												
+	9	1100	447	.8	429	1.0			0	1.09	.08	1	.500	1.33	.019	.959	306	.66	.17	.09
+							508	.9												
+	0	2200	191	.6	126	.8			0	1.40	.08	1	.500	1.33	.320	.659	757	.33	.17	.22
+							198	.7												
+	21	3200	198	.7	150	1.1			0	1.40	.08	1	.500	1.33	.261	.760	1091	.24	.33	.31
+							---	---												
+	22	4000	243	.7	198	1.4			0	1.38	.08	1	.500	1.33	.227	.816	1296	.21	.66	.37
+							---	---												
1																				

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2
0 STRUCTURE 99	.69		

	ALTERNATE 1	488.80	259.06
	ALTERNATE 2	518.77	251.52
0 STRUCTURE 21	.40		
	ALTERNATE 1	555.10	267.29
	ALTERNATE 2	573.94	243.16
0 STRUCTURE 20	.24		
	ALTERNATE 1	422.48	235.16
	ALTERNATE 2	463.16	197.99
0 STRUCTURE 5	.27		
	ALTERNATE 1	83.44	41.62
	ALTERNATE 2	105.11	54.43
0 STRUCTURE 4	.69		
	ALTERNATE 1	488.80	259.06
	ALTERNATE 2	518.77	251.52
0 STRUCTURE 3	.44		
	ALTERNATE 1	183.49	80.86
	ALTERNATE 2	265.57	88.43
0 STRUCTURE 2	.06		
	ALTERNATE 1	125.96	69.95
	ALTERNATE 2	132.93	64.70
0 STRUCTURE 1	.32		
	ALTERNATE 1	261.61	33.67
	ALTERNATE 2	359.57	79.08
0 XSECTION 1	.12		
	ALTERNATE 1	146.16	69.60
	ALTERNATE 2	167.30	67.53
0 XSECTION 2	.09		
	ALTERNATE 1	206.98	116.82
	ALTERNATE 2	230.66	113.65
0 XSECTION 3	.10		
1			

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2
0 XSECTION 3	.10		
ALTERNATE 1		239.32	136.48
ALTERNATE 2		284.34	143.93
0 XSECTION 4	.07		
ALTERNATE 1		111.41	54.61
ALTERNATE 2		126.90	53.12
0 XSECTION 5	.82		
ALTERNATE 1		579.57	239.38
ALTERNATE 2		575.80	251.78
0 XSECTION 6	.16		
ALTERNATE 1		294.47	165.08
ALTERNATE 2		304.65	147.68
0 XSECTION 7	1.29		
ALTERNATE 1		868.56	386.72
ALTERNATE 2		881.77	375.76
0 XSECTION 8	1.40		
ALTERNATE 1		1019.70	464.61
ALTERNATE 2		1048.99	447.87
0 XSECTION 9	1.55		

+			
	ALTERNATE 1	1139.83	519.64
	ALTERNATE 2	1209.94	511.51
0 XSECTION 21	.08		
+			
	ALTERNATE 1	173.63	106.41
	ALTERNATE 2	169.88	91.35
0 XSECTION 22	.13		
+			
	ALTERNATE 1	299.15	170.61
	ALTERNATE 2	355.42	179.91
0 XSECTION 23	.52		
+			
	ALTERNATE 1	442.81	214.18
	ALTERNATE 2	529.95	241.56
0 XSECTION 24	.08		
+			
	ALTERNATE 1	158.34	87.10
	ALTERNATE 2	167.76	80.69
1			

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2
0 XSECTION 40	.22		
+			
ALTERNATE 1		504.79	314.34
ALTERNATE 2		464.19	253.61
0 XSECTION 41	.20		
+			
ALTERNATE 1		252.30	129.61
ALTERNATE 2		272.12	119.97
0 XSECTION 42	.14		
+			
ALTERNATE 1		200.03	105.81
ALTERNATE 2		208.05	95.41
0 XSECTION 43	.04		
+			
ALTERNATE 1		98.14	58.94
ALTERNATE 2		104.41	56.32
0 XSECTION 44	.10		
+			
ALTERNATE 1		139.43	69.48
ALTERNATE 2		153.57	65.36
0 XSECTION 45	.19		
+			
ALTERNATE 1		157.54	68.85
ALTERNATE 2		188.63	75.39
0 XSECTION 46	.10		
+			
ALTERNATE 1		179.45	94.05
ALTERNATE 2		196.36	89.83
0 XSECTION 50	2.07		
+			
ALTERNATE 1		1559.49	710.12
ALTERNATE 2		1714.64	720.75
0 XSECTION 61	.31		
+			
ALTERNATE 1		124.76	70.92
ALTERNATE 2		123.92	67.09
1END OF 1 JOBS IN THIS RUN			

TR-20 PRINTOUT
FUTURE CONDITIONS

1

**********80-80 LIST OF INPUT DATA FOR TR-20 HYDROLOGY**********

```
JOB TR-20                                          SUMMARY
TITLE   1 STRATTON BASIN EX. FACILITIES/FULL DEV. - 10 & 100 YEAR FLOWS
TITLE     24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR
 5 RAINFL 9                    .0833
 8                    0.0      0.0173      0.0493      0.1201      0.2498
 8                 0.4659      0.5696      0.6180      0.6551      0.6880
 8                 0.7156      0.7433      0.7710      0.7986      0.8263
 8                 0.8539      0.8755      0.8920      0.9084      0.9248
 8                 0.9421      0.9576      0.9741      0.9888         1.0
 9 ENDTBL
 5 RAINFL 8                    .0833
 8                     .0      .0087       .0346       .0744       .1436
 8                   .2647     .4810       .6021       .6713       .7249
 8                   .7682     .8028       .8374       .8720       .8893
 8                   .9066     .9170       .9273       .9377       .9481
 8                   .9585     .9689       .9792       .9896         1.0
 9 ENDTBL
 5 RAINFL 7                      .25
 8                       0     0.0005      0.0015       .0030      0.0045
 8                   0.006      .008         .01         .012       .0143
 8                    .0165     .0188        .021        .0233      .0255
 8                    .0278     .032         .039        .046       .053
 8                     .06      .075          .1          .4         .7
 8                    .725      .75          .765        .78        .79
 8                      .8      .81          .82         .825       .83
 8                    .835      .84          .845        .85        .855
 8                     .86     .8638        .8675       .8713      .875
 8                   .8788     .8825        .8863        .89       .8938
 8                   .8975     .9013        .905        .9083      .9115
 8                   .9148      .918        .921        .924       .927
 8                     .93     .9325        .935        .9375       .94
 8                   .9425      .945        .9475        .95       .9525
 8                    .955     .9575         .96        .9625      .965
 8                   .9675      .97         .9725        .975      .9775
 8                     .98     .9813        .9825       .9838      .985
 8                   .9863     .9875        .9888        .99       .9913
 8                   .9925     .9938        .995        .9963      .9975
 8                   .9988       1.0          1.0         1.0        1.0
 9 ENDTBL
 5 RAINFL 9                    0.0833
 8                     0.0     0.0173      0.0493      0.1201      0.2498
 8                  0.4659     0.5696      0.6180      0.6551      0.6880
 8                  0.7156     0.7433      0.7710      0.7986      0.8263
 8                  0.8539     0.8755      0.8920      0.9084      0.9248
 8                  0.9421     0.9576      0.9741      0.9888         1.0
 9 ENDTBL
```

1

**********80-80 LIST OF INPUT DATA (CONTINUED)**********

```
 3 STRUCT      01
 8                          57.7          0.0         0.0
 8                          60.0         14.5          .8
 8                           62.         27.          1.4
 8                           64.         35.          7.3
 8                          64.5         74.          8.7
 8                          64.7        174.          9.
 8                           65.        495.         10.
 9 ENDTBL
 3 STRUCT      03
 8                           79.          0.0         0.0
 8                           84.       139.42         .137
 8                           86.       203.86         .58
 8                           88.       242.26        1.652
 8                           90.       279.03        3.739
 8                           94.       348.02       10.929
 9 ENDTBL
 3 STRUCT      04
 8                           34.          0.0         0.0
 8                           35.        11.56         .121
 8                           36.        35.06         .73
 8                           38.        106.3        3.492
 8                           40.       203.37        7.569
```

```
 8                              42.      265.49      12.299
 8                             42.6      278.92      13.938
 8                              44.      429.07      17.806
 8                             44.5      752.97      22.311
 8                              48.     1667.44      31.002
 9 ENDTBL
 3 STRUCT      05
 8                              70.         0.0         0.0
 8                              71.         92.         15.
 8                              72.        227.         40.
 8                              73.        360.         69.
 8                              74.        520.         90.
 8                              75.        915.        127.
 8                             75.5       1180.        147.
 9 ENDTBL
 6 RUNOFF 1 044       5 0.104       74.5        0.44        1     1   1
 6 REACH  3    01 5   6 3300.       .5          1.33        1     1   1
 6 RUNOFF 1 045       5 0.083       74.5        0.33        1     1   1
 6 ADDHYD 4 045   5 6 7                                     1     1   1
 6 RUNOFF 1    01     2 0.135       74.5         .22        1     1   1
 6 ADDHYD 4    01 7 2 1                                     1     1   1
 6 RESVOR 2    01 1   7          57.7                       1 1 1 1   1
 6 RUNOFF 1    02     2          .063        79.6          .31     1   1
1
```

**********80-80 LIST OF INPUT DATA (CONTINUED)**********

```
 6 REACH  3 001   7   3         3000.          .5        1.331     1   1
 6 REACH  3 002   2   4         3400.          .5        1.331     1   1
 6 RUNOFF 1 001       5          .116        76.2          .41     1   1
 6 RUNOFF 1 002       6          .093        79.0          .21     1   1
 6 ADDHYD 4    03 3 5 1                                       1 1 1 1   1
 6 RESVOR 2    03 1   5           79.                         1 1 1 1   1
 6 ADDHYD 4 003   6 4 2                                       1 1 1 1   1
 6 REACH  3 003   5   1         1000.          .5        1.331     1   1
 6 ADDHYD 4 003   1 2 4                                         1     1   1
 6 RUNOFF 1 003       3          .100         79.          .11     1   1
 6 ADDHYD 4    04 3 4 7                                       1 1 1 1   1
 6 RESVOR 2    99 7   6           34.                         1 1 1 1   1
 6 REACH  3 004   6   1         2300.          .5        1.331     1   1
 6 RUNOFF 1 004       2          .068         81.          .21     1   1
 6 RUNOFF 1 005       3          .061         92.          .21     1   1
 6 ADDHYD 4 005   1 2 4                                       1 1 1 1   1
 6 ADDHYD 4 005   3 4 7                                         1     1   1
 6 REACH  3 007   7   1         1500.          .5        1.331     1   1
 6 RUNOFF 1 046       4 0.102       80.1        0.29        1     1   1
 6 RUNOFF 1    05     3          .169        80.1          .41     1   1
 6 ADDHYD 4    05 4 3 2                                       1     1   1
 6 RESVOR 2    05 2   3           70.                         1   1 1   1
 6 RUNOFF 1 061       4 0.034       85.         0.15        1     1   1
 6 ADDHYD 4 061   3 4 5                                       1     1   1
 6 REACH  3 006   5   4         2700.          .5        1.331     1   1
 6 RUNOFF 1 006       5          .159         88.          .41     1   1
 6 ADDHYD 4 007   4 5 6                                       1     1   1
 6 ADDHYD 4 007   1 6 7                                       1     1   1
 6 REACH  3 008   7   1          800.          .5        1.331     1   1
 6 RUNOFF 1 008       2          .116         85.          .41     1   1
 6 ADDHYD 4 008   1 2 7                                       1     1   1
 6 REACH  3 009   7   1         1100.          .5        1.331     1   1
 6 RUNOFF 1 009       2          .147         81.          .41     1   1
 6 ADDHYD 4 009   1 2 7                                       1 1   1   1
 6 RUNOFF 1    21     2 0.139       88.         0.26        1     1   1
 6 REACH  3    20 2   6 2200.       .5          1.33        1     1   1
 6 RUNOFF 1    20     2          .103         88.          .271    1   1
 6 ADDHYD 4    20 6 2 1                                       1     1   1
 6 REACH  3 021   1   2         3200.          .5        1.331     1   1
 6 RUNOFF 1 021       3          .076         94.          .41     1   1
 6 RUNOFF 1 024       1          .081         94.          .31     1   1
 6 ADDHYD 4    21 2 3 6                                       1     1   1
 6 ADDHYD 4    21 1 6 4
 6 REACH  3 022   4   5         4000.          .5        1.331     1   1
 6 RUNOFF 1 022       6          .125         94.          .11     1   1
 6 ADDHYD 4 023   5 6 1                                         1 1   1   1
1
```

**********80-80 LIST OF INPUT DATA (CONTINUED)**********

```
 6 ADDHYD 4 050   1 7 5                                    1 1   1   1
 6 RUNOFF 1 040       5 .224        89.5        0.48       1     1   1
 6 RUNOFF 1 041       5 .198        87.1        0.57       1     1   1
 6 RUNOFF 1 042       5 .135        93.8        0.50       1     1   1
 6 RUNOFF 1 043       5 .039        88.0        0.23       1     1   1
   ENDATA
 7 INCREM 6                      .083
 7 COMPUT 7 044   043             0.0         4.50       1.07 2   1   1
   ENDCMP 1
 7 COMPUT 7 044   043             0.0         3.20       1.07 2   1   2
   ENDCMP 1
 7 COMPUT 7 044   043             0.0         3.05       1.08 3   2   1
   ENDCMP 1
 7 COMPUT 7 044   043             0.0         2.06       1.09 3   2   2
   ENDCMP 1
   ENDJOB 2
0*******************************END OF 80-80 LIST*******************************
1
```


FILE NO. 1

0 COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY USER NOTES

THE USERS MANUAL FOR THIS PROGRAM IS THE MAY 1982 DRAFT OF TR-20. CHANGES FROM THE 2/14/74 VERSION INCLUDE:

REACH ROUTING - THE MODIFIED ATT-KIN ROUTING PROCEDURE REPLACES THE CONVEX METHOD. INPUT DATA PREPARED FOR PREVIOUS PROGRAM VERSIONS USING CONVEX ROUTING COEFFICIENTS WILL NOT RUN ON THIS VERSION.

THE PREFERRED TYPE OF DATA ENTRY IS CROSS SECTION DATA REPRESENTATIVE OF A REACH. IT IS RECOMMENDED THAT THE OPTIONAL CROSS SECTION DISCHARGE-AREA PLOTS BE OBTAINED WHENEVER NEW CROSS SECTION DATA IS ENTERED. THE PLOTS SHOULD BE CHECKED FOR REASONABLENESS AND ADEQUACY OF INPUT DATA FOR THE COMPUTATION OF "M" VALUES USED IN THE ROUTING PROCEDURE.

GUIDELINES FOR DETERMINING OR ANALYZING REACH LENGTHS AND COEFFICIENTS (X,M) ARE AVAILABLE IN THE USERS MANUAL. SUMMARY TABLE 2 DISPLAYS REACH ROUTING RESULTS AND ROUTING PARAMETERS FOR COMPARISON AND CHECKING.

HYDROGRAPH GENERATION - THE PROCEDURE TO CALCULATE THE INTERNAL TIME INCREMENT AND PEAK TIME OF THE UNIT HYDROGRAPH HAVE BEEN IMPROVED. PEAK DISCHARGES AND TIMES MAY DIFFER FROM THE PREVIOUS VERSION. OUTPUT HYDROGRAPHS ARE STILL INTERPOLATED, PRINTED, AND ROUTED AT THE USER SELECTED MAIN TIME INCREMENT.

INTERMEDIATE PEAKS - METHOD ADDED TO PROVIDE DISCHARGES AT INTERMEDIATE POINTS WITHIN REACHES WITHOUT ROUTING.

OTHER - THIS VERSION CONTAINS SOME ADDITIONS TO THE INPUT AND NUMEROUS MODIFICATIONS TO THE OUTPUT. USER OPTIONS HAVE BEEN MODIFIED AND AUGMENTED ON THE JOB RECORD, RAINTABLES ADDED, ERROR AND WARNING MESSAGES EXPANDED, AND THE SUMMARY TABLES COMPLETELY REVISED. THE HOLDOUT OPTION IS NOT OPERATIONAL AT THIS TIME.

PROGRAM QUESTIONS OR PROBLEMS SHOULD BE DIRECTED TO HYDRAULIC ENGINEERS AT THE SCS NATIONAL TECHNICAL CENTERS:

CHESTER, PA (NORTHEAST) -- 215-499-3933, FORT WORTH, TX (SOUTH) -- 334-5242 (FTS)
LINCOLN, NB (MIDWEST) -- 541-5318 (FTS), PORTLAND, OR (WEST) -- 423-4099 (FTS)
OR HYDROLOGY UNIT, ENGINEERING DIVISION, LANHAM, MD -- 436-7383 (FTS).

PROGRAM CHANGES SINCE MAY 1982:

12/17/82 - CORRECT PEAK RATE FACTOR FOR USER ENTERED DIMHYD
CORRECT REACH ROUTING PEAK TRAVEL TIME PRINTED WITH FULLPRINT OPTION

5/02/83 - CORRECT COMPUTATIONS FOR ---
1. DIVISION OF BASEFLOW IN DIVERT OPERATION
2. HYDROGRAPH VOLUME SPLIT BETWEEN BASEFLOW AND ABOVE BASEFLOW
3. CROSS SECTION DATA PLOTTING POSITION
4. INTERMEDIATE PEAK WHEN "FROM" AREA IS LARGER THAN "THRU" AREA
5. STORAGE ROUTED REACH TRAVEL TIME FOR MULTIPEAK HYDROGRAPH
6. ORDERING "FLOW-FREQ" FILE FROM SUMMARY TABLE #3 DATA
7. BASEFLOW ENTERED WITH READHYD
8. LOW FLOW SPLIT DURING DIVERT PROCEDURE #2 WHEN SECTION RATINGS START AT DIFFERENT ELEVATIONS

ENHANCEMENTS ---
1. REPLACE USER MANUAL ERROR CODES (PAGE 4-9 TO 4-11) WITH MESSAGES
2. LABEL OUTPUT HYDROGRAPH FILES WITH CROSS SECTION/STRUCTURE, ALTERNATE AND STORM NO'S

09/01/83 - CORRECT INPUT AND OUTPUT ERRORS FOR INTERMEDIATE PEAKS
CORRECT COMBINATION OF RATING TABLES FOR DIVERT
CHECK REACH ROUTING PARAMETERS FOR ACCEPTABLE LIMITS
ELIMINATE MINIMUM REACH TRAVEL TIME WHEN ATT-KIN COEFFICIENT EQUALS ONE

1

CUMULATIVE RAINFALL TABLE 9 TIME INCREMENT= .08

8	.0000	.0173	.0493	.1201	.2498
8	.4659	.5696	.6180	.6551	.6880
8	.7156	.7433	.7710	.7986	.8263
8	.8539	.8755	.8920	.9084	.9248
8	.9421	.9576	.9741	.9888	1.0000

9 ENDTBL

CUMULATIVE RAINFALL TABLE 8 TIME INCREMENT= .08

8	.0000	.0087	.0346	.0744	.1436
8	.2647	.4810	.6021	.6713	.7249
8	.7682	.8028	.8374	.8720	.8893
8	.9066	.9170	.9273	.9377	.9481
8	.9585	.9689	.9792	.9896	1.0000

9 ENDTBL

CUMULATIVE RAINFALL TABLE 7 TIME INCREMENT= .25

8	.0000	.0005	.0015	.0030	.0045
8	.0060	.0080	.0100	.0120	.0143
8	.0165	.0188	.0210	.0233	.0255
8	.0278	.0320	.0390	.0460	.0530
8	.0600	.0750	.1000	.4000	.7000
8	.7250	.7500	.7650	.7800	.7900
8	.8000	.8100	.8200	.8250	.8300
8	.8350	.8400	.8450	.8500	.8550
8	.8600	.8638	.8675	.8713	.8750
8	.8788	.8825	.8863	.8900	.8938
8	.8975	.9013	.9050	.9083	.9115
8	.9148	.9180	.9210	.9240	.9270
8	.9300	.9325	.9350	.9375	.9400
8	.9425	.9450	.9475	.9500	.9525
8	.9550	.9575	.9600	.9625	.9650
8	.9675	.9700	.9725	.9750	.9775
8	.9800	.9813	.9825	.9838	.9850
8	.9863	.9875	.9888	.9900	.9913
8	.9925	.9938	.9950	.9963	.9975
8	.9988	1.0000	1.0000	1.0000	1.0000

9 ENDTBL

1

CUMULATIVE RAINFALL TABLE 9 TIME INCREMENT= .08

8	.0000	.0173	.0493	.1201	.2498
8	.4659	.5696	.6180	.6551	.6880
8	.7156	.7433	.7710	.7986	.8263
8	.8539	.8755	.8920	.9084	.9248
8	.9421	.9576	.9741	.9888	1.0000

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 1

	ELEVATION	DISCHARGE	STORAGE
8	57.70	.00	.00
8	60.00	14.50	.80
8	62.00	27.00	1.40
8	64.00	35.00	7.30

8	64.50	74.00	8.70
8	64.70	174.00	9.00
8	65.00	495.00	10.00

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 3

	ELEVATION	DISCHARGE	STORAGE
8	79.00	.00	.00
8	84.00	139.42	.14
8	86.00	203.86	.58
8	88.00	242.26	1.65
8	90.00	279.03	3.74
8	94.00	348.02	10.93

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 4

	ELEVATION	DISCHARGE	STORAGE
8	34.00	.00	.00
8	35.00	11.56	.12
8	36.00	35.06	.73
8	38.00	106.30	3.49
8	40.00	203.37	7.57
8	42.00	265.49	12.30
8	42.60	278.92	13.94
8	44.00	429.07	17.81

1

8	44.50	752.97	22.31
8	48.00	1667.44	31.00

9 ENDTBL

STRUCTURE DATA, STRUCTURE NO. 5

	ELEVATION	DISCHARGE	STORAGE
8	70.00	.00	.00
8	71.00	92.00	15.00
8	72.00	227.00	40.00
8	73.00	360.00	69.00
8	74.00	520.00	90.00
8	75.00	915.00	127.00
8	75.50	1180.00	147.00

9 ENDTBL

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 44			RECORD ID	
OUTPUT HYDROGRAPH = 5	DATA FIELD VALUES =	.1040	74.5000	.4400
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM				
STANDARD CONTROL OPERATION REACH STRUCTURE 1			RECORD ID	
INPUT HYDROGRAPH = 5 OUTPUT HYDROGRAPH = 6	DATA FIELD VALUES =	3300.0000	.5000	1.3300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM				
STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 45			RECORD ID	
OUTPUT HYDROGRAPH = 5	DATA FIELD VALUES =	.0830	74.5000	.3300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM				
STANDARD CONTROL OPERATION ADDHYD CROSS SECTION 45			RECORD ID	
INPUT HYDROGRAPHS = 5,6 OUTPUT HYDROGRAPH = 7	DATA FIELD VALUES =	.0000	.0000	.0000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM				
STANDARD CONTROL OPERATION RUNOFF STRUCTURE 1			RECORD ID	
OUTPUT HYDROGRAPH = 2	DATA FIELD VALUES =	.1350	74.5000	.2200
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM				
STANDARD CONTROL OPERATION ADDHYD STRUCTURE 1			RECORD ID	
INPUT HYDROGRAPHS = 7,2 OUTPUT HYDROGRAPH = 1	DATA FIELD VALUES =	.0000	.0000	.0000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM				
STANDARD CONTROL OPERATION RESVOR STRUCTURE 1			RECORD ID	
INPUT HYDROGRAPH = 1 OUTPUT HYDROGRAPH = 7	DATA FIELD VALUES =	57.7000	.0000	.0000
OUTPUT OPTIONS IN EFFECT PEAK HYD ELEV VOL SUM				

STANDARD CONTROL OPERATION RUNOFF STRUCTURE 2
OUTPUT HYDROGRAPH = 2
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .0630 RECORD ID 79.6000 .3000

1

STANDARD CONTROL OPERATION REACH CROSS SECTION 1
INPUT HYDROGRAPH = 7 OUTPUT HYDROGRAPH = 3
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = 3000.0000 RECORD ID .5000 1.3300

STANDARD CONTROL OPERATION REACH CROSS SECTION 2
INPUT HYDROGRAPH = 2 OUTPUT HYDROGRAPH = 4
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = 3400.0000 RECORD ID .5000 1.3300

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 1
OUTPUT HYDROGRAPH = 5
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .1160 RECORD ID 76.2000 .4000

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 2
OUTPUT HYDROGRAPH = 6
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .0930 RECORD ID 79.0000 .2000

STANDARD CONTROL OPERATION ADDHYD STRUCTURE 3
INPUT HYDROGRAPHS = 3,5 OUTPUT HYDROGRAPH = 1
OUTPUT OPTIONS IN EFFECT PEAK HYD ELEV VOL SUM

DATA FIELD VALUES = .0000 RECORD ID .0000 .0000

STANDARD CONTROL OPERATION RESVOR STRUCTURE 3
INPUT HYDROGRAPH = 1 OUTPUT HYDROGRAPH = 5
OUTPUT OPTIONS IN EFFECT PEAK HYD ELEV VOL SUM

DATA FIELD VALUES = 79.0000 RECORD ID .0000 .0000

STANDARD CONTROL OPERATION ADDHYD CROSS SECTION 3
INPUT HYDROGRAPHS = 6,4 OUTPUT HYDROGRAPH = 2
OUTPUT OPTIONS IN EFFECT PEAK HYD ELEV VOL SUM

DATA FIELD VALUES = .0000 RECORD ID .0000 .0000

STANDARD CONTROL OPERATION REACH CROSS SECTION 3
INPUT HYDROGRAPH = 5 OUTPUT HYDROGRAPH = 1
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = 1000.0000 RECORD ID .5000 1.3300

STANDARD CONTROL OPERATION ADDHYD CROSS SECTION 3
INPUT HYDROGRAPHS = 1,2 OUTPUT HYDROGRAPH = 4
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .0000 RECORD ID .0000 .0000

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 3
OUTPUT HYDROGRAPH = 3
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .1000 RECORD ID 79.0000 .1000

STANDARD CONTROL OPERATION ADDHYD STRUCTURE 4
INPUT HYDROGRAPHS = 3,4 OUTPUT HYDROGRAPH = 7
OUTPUT OPTIONS IN EFFECT PEAK HYD ELEV VOL SUM

DATA FIELD VALUES = .0000 RECORD ID .0000 .0000

STANDARD CONTROL OPERATION RESVOR STRUCTURE 99
INPUT HYDROGRAPH = 7 OUTPUT HYDROGRAPH = 6
OUTPUT OPTIONS IN EFFECT PEAK HYD ELEV VOL SUM

DATA FIELD VALUES = 34.0000 RECORD ID .0000 .0000

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STANDARD CONTROL OPERATION REACH CROSS SECTION 4
INPUT HYDROGRAPH = 6 OUTPUT HYDROGRAPH = 1
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = 2300.0000 RECORD ID .5000 1.3300

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 4
OUTPUT HYDROGRAPH = 2
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .0680 RECORD ID 81.0000 .2000

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 5
OUTPUT HYDROGRAPH = 3
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

DATA FIELD VALUES = .0610 RECORD ID 92.0000 .2000

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STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   5                                                    RECORD ID
        INPUT HYDROGRAPHS = 1,2     OUTPUT HYDROGRAPH = 4      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  HYD   ELEV  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   5                                                    RECORD ID
        INPUT HYDROGRAPHS = 3,4     OUTPUT HYDROGRAPH = 7      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION REACH    CROSS SECTION   7                                                    RECORD ID
        INPUT HYDROGRAPH = 7        OUTPUT HYDROGRAPH = 1      DATA FIELD VALUES =   1500.0000       .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  46                                                    RECORD ID
        OUTPUT HYDROGRAPH = 4                                  DATA FIELD VALUES =      .1020     80.1000       .2900
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION RUNOFF   STRUCTURE   5                                                    RECORD ID
        OUTPUT HYDROGRAPH = 3                                  DATA FIELD VALUES =      .1690     80.1000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   STRUCTURE   5                                                    RECORD ID
        INPUT HYDROGRAPHS = 4,3     OUTPUT HYDROGRAPH = 2      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION RESVOR   STRUCTURE   5                                                    RECORD ID
        INPUT HYDROGRAPH = 2        OUTPUT HYDROGRAPH = 3      DATA FIELD VALUES =     70.0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  ELEV  VOL   SUM

STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION  61                                                    RECORD ID
        OUTPUT HYDROGRAPH = 4                                  DATA FIELD VALUES =      .0340     85.0000       .1500
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION  61                                                    RECORD ID
        INPUT HYDROGRAPHS = 3,4     OUTPUT HYDROGRAPH = 5      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM
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STANDARD CONTROL OPERATION REACH    CROSS SECTION   6                                                    RECORD ID
        INPUT HYDROGRAPH = 5        OUTPUT HYDROGRAPH = 4      DATA FIELD VALUES =   2700.0000       .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   6                                                    RECORD ID
        OUTPUT HYDROGRAPH = 5                                  DATA FIELD VALUES =      .1590     88.0000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   7                                                    RECORD ID
        INPUT HYDROGRAPHS = 4,5     OUTPUT HYDROGRAPH = 6      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   7                                                    RECORD ID
        INPUT HYDROGRAPHS = 1,6     OUTPUT HYDROGRAPH = 7      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION REACH    CROSS SECTION   8                                                    RECORD ID
        INPUT HYDROGRAPH = 7        OUTPUT HYDROGRAPH = 1      DATA FIELD VALUES =    800.0000       .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   8                                                    RECORD ID
        OUTPUT HYDROGRAPH = 2                                  DATA FIELD VALUES =      .1160     85.0000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   8                                                    RECORD ID
        INPUT HYDROGRAPHS = 1,2     OUTPUT HYDROGRAPH = 7      DATA FIELD VALUES =      .0000       .0000       .0000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION REACH    CROSS SECTION   9                                                    RECORD ID
        INPUT HYDROGRAPH = 7        OUTPUT HYDROGRAPH = 1      DATA FIELD VALUES =   1100.0000       .5000      1.3300
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION RUNOFF   CROSS SECTION   9                                                    RECORD ID
        OUTPUT HYDROGRAPH = 2                                  DATA FIELD VALUES =      .1470     81.0000       .4000
        OUTPUT OPTIONS IN EFFECT  PEAK  VOL   SUM

STANDARD CONTROL OPERATION ADDHYD   CROSS SECTION   9                                                    RECORD ID
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INPUT HYDROGRAPHS = 1,2 OUTPUT HYDROGRAPH = 7 DATA FIELD VALUES = .0000 .0000 .0000
OUTPUT OPTIONS IN EFFECT PEAK HYD VOL SUM

STANDARD CONTROL OPERATION RUNOFF STRUCTURE 21 RECORD ID
OUTPUT HYDROGRAPH = 2 DATA FIELD VALUES = .1390 88.0000 .2600
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION REACH STRUCTURE 20 RECORD ID
INPUT HYDROGRAPH = 2 OUTPUT HYDROGRAPH = 6 DATA FIELD VALUES = 2200.0000 .5000 1.3300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

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STANDARD CONTROL OPERATION RUNOFF STRUCTURE 20 RECORD ID
OUTPUT HYDROGRAPH = 2 DATA FIELD VALUES = .1030 88.0000 .2700
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION ADDHYD STRUCTURE 20 RECORD ID
INPUT HYDROGRAPHS = 6,2 OUTPUT HYDROGRAPH = 1 DATA FIELD VALUES = .0000 .0000 .0000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION REACH CROSS SECTION 21 RECORD ID
INPUT HYDROGRAPH = 1 OUTPUT HYDROGRAPH = 2 DATA FIELD VALUES = 3200.0000 .5000 1.3300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 21 RECORD ID
OUTPUT HYDROGRAPH = 3 DATA FIELD VALUES = .0760 94.0000 .4000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 24 RECORD ID
OUTPUT HYDROGRAPH = 1 DATA FIELD VALUES = .0810 94.0000 .3000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION ADDHYD STRUCTURE 21 RECORD ID
INPUT HYDROGRAPHS = 2,3 OUTPUT HYDROGRAPH = 6 DATA FIELD VALUES = .0000 .0000 .0000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION ADDHYD STRUCTURE 21 RECORD ID
INPUT HYDROGRAPHS = 1,6 OUTPUT HYDROGRAPH = 4 DATA FIELD VALUES = .0000 .0000 .0000
OUTPUT OPTIONS IN EFFECT SUM

STANDARD CONTROL OPERATION REACH CROSS SECTION 22 RECORD ID
INPUT HYDROGRAPH = 4 OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = 4000.0000 .5000 1.3300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 22 RECORD ID
OUTPUT HYDROGRAPH = 6 DATA FIELD VALUES = .1250 94.0000 .1000
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION ADDHYD CROSS SECTION 23 RECORD ID
INPUT HYDROGRAPHS = 5,6 OUTPUT HYDROGRAPH = 1 DATA FIELD VALUES = .0000 .0000 .0000
OUTPUT OPTIONS IN EFFECT PEAK HYD VOL SUM

STANDARD CONTROL OPERATION ADDHYD CROSS SECTION 50 RECORD ID
INPUT HYDROGRAPHS = 1,7 OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .0000 .0000 .0000
OUTPUT OPTIONS IN EFFECT PEAK HYD VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 40 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .2240 89.5000 .4800
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

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STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 41 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .1980 87.1000 .5700
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 42 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .1350 93.8000 .5000

OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

STANDARD CONTROL OPERATION RUNOFF CROSS SECTION 43 RECORD ID
OUTPUT HYDROGRAPH = 5 DATA FIELD VALUES = .0390 88.0000 .2300
OUTPUT OPTIONS IN EFFECT PEAK VOL SUM

EXECUTIVE CONTROL OPERATION INCREM RECORD ID
+ MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID
+ FROM XSECTION 44
+ TO XSECTION 43
STARTING TIME = .00 RAIN DEPTH = 4.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .08 HOURS

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	139.43	(RUNOFF)
9.94	4.40	(RUNOFF)
19.92	2.32	(RUNOFF)
23.89	1.18	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 134.84 CFS-HRS, 11.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	88.86	64.53
13.16	3.37	58.23
20.13	2.32	58.07

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 134.63 CFS-HRS, 11.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	128.75	(RUNOFF)
7.93	6.87	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 107.62 CFS-HRS, 8.89 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	157.54	(NULL)
12.85	6.07	(NULL)
19.90	4.17	(NULL)
23.83	2.12	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 242.25 CFS-HRS, 20.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	246.50	(RUNOFF)
7.93	11.20	(RUNOFF)
9.93	5.72	(RUNOFF)
19.90	3.02	(RUNOFF)
23.78	1.56	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 175.23 CFS-HRS, 14.48 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.05	389.76	64.90
12.80	10.48	59.36
13.67	9.36	59.18
19.90	7.19	58.84
23.80	3.68	58.28

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 417.48 CFS-HRS, 34.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	261.61	64.78
19.97	7.17	58.84
23.87	3.65	58.28

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS			TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.32 SQ.MI.
4.98	DISCHG	.00	.00	.00	.00	.00	.00	.02	.77	5.30
4.98	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.82	58.54

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5.81	DISCHG	18.06	28.09	30.55	33.63	65.88	251.08	205.36	169.48	152.70	140.61
5.81	ELEV	60.57	62.27	62.89	63.66	64.40	64.77	64.73	64.69	64.66	64.63
6.64	DISCHG	126.68	111.17	97.54	86.80	78.05	73.43	71.70	68.94	65.54	61.91
6.64	ELEV	64.61	64.57	64.55	64.53	64.51	64.49	64.47	64.44	64.39	64.34
7.47	DISCHG	58.27	54.77	51.47	48.41	45.62	43.11	40.87	38.86	36.86	34.98
7.47	ELEV	64.30	64.25	64.21	64.17	64.14	64.10	64.08	64.05	64.02	64.00
8.30	DISCHG	34.86	34.72	34.57	34.41	34.25	34.09	33.92	33.75	33.57	33.40
8.30	ELEV	63.96	63.93	63.89	63.85	63.81	63.77	63.73	63.69	63.64	63.60
9.13	DISCHG	33.22	33.05	32.87	32.70	32.52	32.35	32.18	32.01	31.84	31.67
9.13	ELEV	63.56	63.51	63.47	63.42	63.38	63.34	63.29	63.25	63.21	63.17
9.96	DISCHG	31.50	31.34	31.17	31.00	30.83	30.65	30.47	30.29	30.11	29.94
9.96	ELEV	63.13	63.08	63.04	63.00	62.96	62.91	62.87	62.82	62.78	62.73
10.79	DISCHG	29.76	29.58	29.41	29.23	29.06	28.89	28.72	28.55	28.38	28.22
10.79	ELEV	62.69	62.65	62.60	62.56	62.52	62.47	62.43	62.39	62.35	62.30
11.62	DISCHG	28.05	27.89	27.73	27.56	27.41	27.25	27.09	26.09	24.00	22.19
11.62	ELEV	62.26	62.22	62.18	62.14	62.10	62.06	62.02	61.85	61.52	61.23
12.45	DISCHG	20.62	19.26	18.07	17.05	16.17	15.41	14.75	14.21	13.75	13.32
12.45	ELEV	60.98	60.76	60.57	60.41	60.27	60.15	60.04	59.95	59.88	59.81
13.28	DISCHG	12.92	12.54	12.19	11.87	11.58	11.32	11.09	10.88	10.69	10.52
13.28	ELEV	59.75	59.69	59.63	59.58	59.54	59.50	59.46	59.43	59.40	59.37
14.11	DISCHG	10.35	10.19	10.03	9.88	9.74	9.61	9.50	9.39	9.29	9.21
14.11	ELEV	59.34	59.32	59.29	59.27	59.25	59.22	59.21	59.19	59.17	59.16
14.94	DISCHG	9.13	9.05	8.98	8.88	8.76	8.64	8.51	8.39	8.28	8.17
14.94	ELEV	59.15	59.14	59.12	59.11	59.09	59.07	59.05	59.03	59.01	59.00
15.77	DISCHG	8.07	7.98	7.89	7.81	7.73	7.67	7.60	7.55	7.50	7.46
15.77	ELEV	58.98	58.97	58.95	58.94	58.93	58.92	58.91	58.90	58.89	58.88
16.60	DISCHG	7.42	7.38	7.35	7.32	7.30	7.27	7.25	7.24	7.22	7.21
16.60	ELEV	58.88	58.87	58.87	58.86	58.86	58.85	58.85	58.85	58.85	58.84
17.43	DISCHG	7.20	7.19	7.18	7.18	7.17	7.16	7.16	7.16	7.15	7.15
17.43	ELEV	58.84	58.84	58.84	58.84	58.84	58.84	58.84	58.84	58.83	58.83
18.26	DISCHG	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15	7.15
18.26	ELEV	58.83	58.83	58.83	58.83	58.83	58.83	58.83	58.83	58.83	58.83
19.09	DISCHG	7.15	7.15	7.16	7.16	7.16	7.16	7.16	7.16	7.17	7.17
19.09	ELEV	58.83	58.83	58.84	58.84	58.84	58.84	58.84	58.84	58.84	58.84
19.92	DISCHG	7.17	7.17	7.16	7.08	6.93	6.74	6.53	6.32	6.10	5.90
19.92	ELEV	58.84	58.84	58.84	58.82	58.80	58.77	58.74	58.70	58.67	58.64
20.75	DISCHG	5.71	5.52	5.35	5.18	5.02	4.88	4.75	4.64	4.53	4.43
20.75	ELEV	58.61	58.58	58.55	58.52	58.50	58.47	58.45	58.44	58.42	58.40
21.58	DISCHG	4.34	4.25	4.19	4.13	4.07	4.02	3.97	3.92	3.89	3.86
21.58	ELEV	58.39	58.37	58.36	58.35	58.35	58.34	58.33	58.32	58.32	58.31
22.41	DISCHG	3.84	3.81	3.78	3.76	3.74	3.73	3.72	3.71	3.69	3.68
22.41	ELEV	58.31	58.30	58.30	58.30	58.29	58.29	58.29	58.29	58.29	58.28
23.24	DISCHG	3.68	3.67	3.67	3.66	3.65	3.64	3.64	3.65	3.65	3.64
23.24	ELEV	58.28	58.28	58.28	58.28	58.28	58.28	58.28	58.28	58.28	58.28
24.07	DISCHG	3.62	3.55	3.40	3.20	2.99	2.77	2.56	2.35	2.15	1.96
24.07	ELEV	58.27	58.26	58.24	58.21	58.17	58.14	58.11	58.07	58.04	58.01

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 418.36 CFS-HRS, 34.57 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	125.96	(RUNOFF)
7.93	5.84	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.42 WATERSHED INCHES, 98.57 CFS-HRS, 8.15 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.60	140.30	(NULL)
20.07	7.17	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.00 WATERSHED INCHES, 414.75 CFS-HRS, 34.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	74.28	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.42 WATERSHED INCHES, 98.38 CFS-HRS, 8.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	176.93	(RUNOFF)
9.93	5.10	(RUNOFF)
19.93	2.67	(RUNOFF)
23.87	1.36	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.14 WATERSHED INCHES, 160.45 CFS-HRS, 13.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.02	206.98	(RUNOFF)
7.93	8.54	(RUNOFF)
9.92	4.33	(RUNOFF)
19.90	2.25	(RUNOFF)
23.77	1.17	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.38 WATERSHED INCHES, 142.93 CFS-HRS, 11.81 ACRE-FEET; BASEFLOW = .00 CFS

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TR20 XEQ STRATTON BASIN EX. FACILITIES/FULL DEV. - 10 & 100 YEAR FLOWS JOB 1 PASS 1
REV 09/01/83 24-HR/AMC II STORM #1: 100 YR. STORM #2: 10 YEAR PAGE 13

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	197.12	85.79
6.34	203.63	85.99
19.96	9.84	79.35
23.85	5.02	79.18

FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

TIME(HRS)											
4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.27	3.62	18.41
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.01	79.13	79.66
5.81	DISCHG	49.00	94.89	145.29	184.69	197.10	182.73	202.28	198.58	190.26	182.25
5.81	ELEV	80.76	82.40	84.18	85.40	85.79	85.34	85.95	85.84	85.58	85.33
6.64	DISCHG	174.13	164.08	152.57	140.60	129.39	118.98	109.86	102.20	95.60	89.89
6.64	ELEV	85.08	84.77	84.41	84.04	83.64	83.27	82.94	82.67	82.43	82.22
7.47	DISCHG	84.83	80.25	76.01	72.05	68.35	64.92	61.74	58.76	55.60	52.11
7.47	ELEV	82.04	81.88	81.73	81.58	81.45	81.33	81.21	81.11	80.99	80.87
8.30	DISCHG	48.66	46.00	44.14	42.82	41.85	41.12	40.56	40.12	39.76	39.45
8.30	ELEV	80.75	80.65	80.58	80.54	80.50	80.47	80.45	80.44	80.43	80.41

9.13	DISCHG	39.18	38.94	38.72	38.51	38.31	38.13	37.94	37.76	37.59	37.41
9.13	ELEV	80.41	80.40	80.39	80.38	80.37	80.37	80.36	80.35	80.35	80.34
9.96	DISCHG	37.24	37.05	36.78	36.38	35.94	35.53	35.19	34.92	34.68	34.48
9.96	ELEV	80.34	80.33	80.32	80.30	80.29	80.27	80.26	80.25	80.24	80.24
10.79	DISCHG	34.30	34.12	33.93	33.74	33.55	33.39	33.23	33.07	32.89	32.70
10.79	ELEV	80.23	80.22	80.22	80.21	80.20	80.20	80.19	80.19	80.18	80.17
11.62	DISCHG	32.53	32.37	32.22	32.06	31.89	31.72	31.55	31.40	31.03	30.20
11.62	ELEV	80.17	80.16	80.16	80.15	80.14	80.14	80.13	80.13	80.11	80.08
12.45	DISCHG	29.09	27.85	26.58	25.34	24.18	23.09	22.07	21.14	20.28	19.47
12.45	ELEV	80.04	80.00	79.95	79.91	79.87	79.83	79.79	79.76	79.73	79.70
13.28	DISCHG	18.73	18.06	17.46	16.93	16.47	16.06	15.71	15.39	15.09	14.81
13.28	ELEV	79.67	79.65	79.63	79.61	79.59	79.58	79.56	79.55	79.54	79.53
14.11	DISCHG	14.53	14.27	14.01	13.77	13.56	13.37	13.21	13.05	12.91	12.79
14.11	ELEV	79.52	79.51	79.50	79.49	79.49	79.48	79.47	79.47	79.46	79.46
14.94	DISCHG	12.67	12.56	12.43	12.25	12.04	11.84	11.66	11.51	11.37	11.24
14.94	ELEV	79.45	79.45	79.45	79.44	79.43	79.42	79.42	79.41	79.41	79.40
15.77	DISCHG	11.12	11.01	10.90	10.80	10.70	10.61	10.53	10.45	10.38	10.32
15.77	ELEV	79.40	79.39	79.39	79.39	79.38	79.38	79.38	79.37	79.37	79.37
16.60	DISCHG	10.26	10.21	10.16	10.11	10.07	10.04	10.01	9.98	9.96	9.93
16.60	ELEV	79.37	79.37	79.36	79.36	79.36	79.36	79.36	79.36	79.36	79.36
17.43	DISCHG	9.91	9.90	9.88	9.87	9.86	9.85	9.84	9.84	9.83	9.83
17.43	ELEV	79.36	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35
18.26	DISCHG	9.82	9.82	9.82	9.82	9.81	9.81	9.81	9.81	9.81	9.82
18.26	ELEV	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35
19.09	DISCHG	9.82	9.82	9.82	9.82	9.82	9.82	9.83	9.83	9.83	9.83
19.09	ELEV	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35
19.92	DISCHG	9.84	9.84	9.79	9.60	9.29	8.96	8.65	8.39	8.15	7.95
19.92	ELEV	79.35	79.35	79.35	79.34	79.33	79.32	79.31	79.30	79.29	79.29

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20.75	DISCHG	7.76	7.58	7.38	7.18	6.99	6.82	6.67	6.53	6.38	6.24
20.75	ELEV	79.28	79.27	79.26	79.26	79.25	79.24	79.24	79.23	79.23	79.22
21.58	DISCHG	6.10	5.98	5.89	5.80	5.72	5.63	5.54	5.47	5.43	5.39
21.58	ELEV	79.22	79.21	79.21	79.21	79.21	79.20	79.20	79.20	79.19	79.19
22.41	DISCHG	5.34	5.29	5.24	5.20	5.19	5.17	5.15	5.12	5.09	5.07
22.41	ELEV	79.19	79.19	79.19	79.19	79.19	79.19	79.18	79.18	79.18	79.18
23.24	DISCHG	5.07	5.07	5.06	5.04	5.01	5.01	5.01	5.02	5.02	5.00
23.24	ELEV	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18
24.07	DISCHG	4.94	4.77	4.45	4.10	3.79	3.53	3.30	3.08	2.88	2.68
24.07	ELEV	79.18	79.17	79.16	79.15	79.14	79.13	79.12	79.11	79.10	79.10

RUNOFF VOLUME ABOVE BASEFLOW = 2.03 WATERSHED INCHES, 575.20 CFS-HRS, 47.53 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	197.45	85.80
19.96	9.84	79.35
23.86	5.02	79.18

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.21	2.91	15.51
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.01	79.10	79.56
5.81	DISCHG	43.79	87.56	138.13	156.75	179.48	186.43	190.48	197.10	195.32	189.28
5.81	ELEV	80.57	82.14	83.95	84.54	85.24	85.46	85.58	85.79	85.73	85.55
6.64	DISCHG	181.90	173.38	163.36	152.19	140.74	116.77	113.12	102.10	97.12	90.31
6.64	ELEV	85.32	85.05	84.74	84.40	84.04	83.19	83.06	82.66	82.48	82.24
7.47	DISCHG	85.72	80.78	76.66	72.56	68.89	65.39	62.19	59.17	56.07	52.63
7.47	ELEV	82.07	81.90	81.75	81.60	81.47	81.35	81.23	81.12	81.01	80.89
8.30	DISCHG	49.14	46.33	44.38	42.98	41.97	41.21	40.64	40.18	39.81	39.49
8.30	ELEV	80.76	80.66	80.59	80.54	80.51	80.48	80.46	80.44	80.43	80.42
9.13	DISCHG	39.22	38.97	38.75	38.54	38.34	38.15	37.97	37.79	37.61	37.44
9.13	ELEV	80.41	80.40	80.39	80.38	80.38	80.37	80.36	80.36	80.35	80.34
9.96	DISCHG	37.27	37.08	36.83	36.45	36.00	35.59	35.24	34.95	34.71	34.51
9.96	ELEV	80.34	80.33	80.32	80.31	80.29	80.28	80.26	80.25	80.24	80.24
10.79	DISCHG	34.33	34.15	33.96	33.77	33.58	33.41	33.25	33.09	32.92	32.73
10.79	ELEV	80.23	80.22	80.22	80.21	80.20	80.20	80.19	80.19	80.18	80.17
11.62	DISCHG	32.55	32.39	32.24	32.09	31.92	31.74	31.57	31.42	31.10	30.35
11.62	ELEV	80.17	80.16	80.16	80.15	80.14	80.14	80.13	80.13	80.12	80.09
12.45	DISCHG	29.26	28.04	26.76	25.52	24.34	23.24	22.21	21.27	20.40	19.59
12.45	ELEV	80.05	80.01	79.96	79.92	79.87	79.83	79.80	79.76	79.73	79.70
13.28	DISCHG	18.83	18.15	17.55	17.01	16.53	16.12	15.76	15.44	15.13	14.85
13.28	ELEV	79.68	79.65	79.63	79.61	79.59	79.58	79.57	79.55	79.54	79.53
14.11	DISCHG	14.57	14.30	14.04	13.80	13.59	13.40	13.23	13.08	12.93	12.81

14.11	ELEV	79.52	79.51	79.50	79.50	79.49	79.48	79.47	79.47	79.46	79.46
14.94	DISCHG	12.69	12.58	12.45	12.28	12.07	11.87	11.69	11.53	11.39	11.26
14.94	ELEV	79.46	79.45	79.45	79.44	79.43	79.43	79.42	79.41	79.41	79.40
15.77	DISCHG	11.14	11.02	10.92	10.81	10.72	10.63	10.54	10.47	10.39	10.33

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15.77	ELEV	79.40	79.40	79.39	79.39	79.38	79.38	79.38	79.38	79.37	79.37
16.60	DISCHG	10.27	10.21	10.16	10.12	10.08	10.04	10.01	9.98	9.96	9.94
16.60	ELEV	79.37	79.37	79.36	79.36	79.36	79.36	79.36	79.36	79.36	79.36
17.43	DISCHG	9.92	9.90	9.89	9.87	9.86	9.85	9.84	9.84	9.83	9.83
17.43	ELEV	79.36	79.36	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35
18.26	DISCHG	9.82	9.82	9.82	9.82	9.81	9.81	9.81	9.81	9.81	9.81
18.26	ELEV	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35
19.09	DISCHG	9.82	9.82	9.82	9.82	9.82	9.82	9.83	9.83	9.83	9.83
19.09	ELEV	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35	79.35
19.92	DISCHG	9.84	9.84	9.80	9.64	9.34	9.00	8.69	8.43	8.19	7.98
19.92	ELEV	79.35	79.35	79.35	79.35	79.34	79.32	79.31	79.30	79.29	79.29
20.75	DISCHG	7.78	7.60	7.41	7.21	7.02	6.84	6.69	6.55	6.40	6.26
20.75	ELEV	79.28	79.27	79.27	79.26	79.25	79.25	79.24	79.23	79.23	79.22
21.58	DISCHG	6.12	6.00	5.90	5.82	5.73	5.64	5.55	5.48	5.43	5.40
21.58	ELEV	79.22	79.22	79.21	79.21	79.21	79.20	79.20	79.20	79.19	79.19
22.41	DISCHG	5.35	5.30	5.25	5.21	5.19	5.18	5.16	5.12	5.09	5.07
22.41	ELEV	79.19	79.19	79.19	79.19	79.19	79.19	79.18	79.18	79.18	79.18
23.24	DISCHG	5.07	5.07	5.06	5.04	5.02	5.01	5.01	5.02	5.02	5.00
23.24	ELEV	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18	79.18
24.07	DISCHG	4.95	4.80	4.50	4.15	3.83	3.56	3.33	3.12	2.91	2.70
24.07	ELEV	79.18	79.17	79.16	79.15	79.14	79.13	79.12	79.11	79.10	79.10

RUNOFF VOLUME ABOVE BASEFLOW = 2.03 WATERSHED INCHES, 574.94 CFS-HRS, 47.51 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	219.51	(NULL)
6.37	98.75	(NULL)
12.76	5.58	(NULL)
19.92	3.78	(NULL)
23.76	1.94	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .16 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	1.18	20.68	68.46
5.81	DISCHG	120.02	163.47	200.51	215.96	153.51	105.34	97.65	98.62	95.68	87.95
6.64	DISCHG	76.40	65.93	57.93	51.38	45.78	40.70	35.11	30.51	27.39	25.02
7.47	DISCHG	23.04	21.35	19.96	18.83	17.91	17.18	16.61	15.90	13.85	12.09
8.30	DISCHG	11.29	10.79	10.30	9.79	9.33	8.94	8.60	8.33	8.11	7.94
9.13	DISCHG	7.79	7.68	7.60	7.53	7.47	7.43	7.40	7.38	7.36	7.35
9.96	DISCHG	7.34	7.28	6.90	6.51	6.35	6.24	6.13	6.02	5.95	5.90
10.79	DISCHG	5.83	5.74	5.67	5.62	5.62	5.63	5.62	5.57	5.53	5.52
11.62	DISCHG	5.54	5.57	5.57	5.54	5.51	5.50	5.53	5.56	5.57	5.54
12.45	DISCHG	5.51	5.51	5.54	5.57	5.58	5.56	5.53	5.51	5.40	5.26
13.28	DISCHG	5.19	5.13	5.07	5.02	5.01	5.01	4.99	4.94	4.89	4.86
14.11	DISCHG	4.79	4.71	4.67	4.64	4.62	4.60	4.58	4.56	4.54	4.53
14.94	DISCHG	4.52	4.51	4.37	4.19	4.10	4.06	4.02	3.98	3.94	3.91
15.77	DISCHG	3.87	3.85	3.83	3.81	3.80	3.79	3.78	3.77	3.77	3.77

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16.60	DISCHG	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.76
17.43	DISCHG	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.76	3.77	3.77
18.26	DISCHG	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.77	3.78
19.09	DISCHG	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78
19.92	DISCHG	3.78	3.78	3.58	3.11	2.85	2.73	2.61	2.49	2.40	2.34
20.75	DISCHG	2.28	2.20	2.11	2.04	2.02	2.02	2.02	1.99	1.94	1.91
21.58	DISCHG	1.91	1.94	1.95	1.94	1.90	1.88	1.88	1.92	1.94	1.93
22.41	DISCHG	1.89	1.87	1.88	1.91	1.93	1.93	1.89	1.87	1.88	1.91
23.24	DISCHG	1.93	1.93	1.89	1.87	1.88	1.91	1.94	1.93	1.89	1.87
24.07	DISCHG	1.73	1.26	.95	.82	.74	.64	.54	.44	.36	.29

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 241.32 CFS-HRS, 19.94 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	194.26	(NULL)
20.05	9.84	(NULL)
23.96	5.02	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.04 WATERSHED INCHES, 575.44 CFS-HRS, 47.55 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	326.52	(NULL)
6.47	288.23	(NULL)
19.96	13.64	(NULL)
23.73	6.95	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.13 WATERSHED INCHES, 816.76 CFS-HRS, 67.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.96	239.32	(RUNOFF)
6.44	22.46	(RUNOFF)
6.93	13.66	(RUNOFF)
7.93	9.32	(RUNOFF)
9.92	4.68	(RUNOFF)
19.89	2.42	(RUNOFF)
23.71	1.27	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.37 WATERSHED INCHES, 153.26 CFS-HRS, 12.67 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.01	511.47	44.13
6.46	310.52	42.89
19.93	16.04	35.19
23.71	8.22	34.71

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	5.52	83.28	199.20
4.98	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.48	37.35	39.91
5.81	DISCHG	307.62	405.92	502.52	493.08	334.10	293.02	297.06	306.02	310.32	301.33
5.81	ELEV	42.87	43.78	44.11	44.10	43.11	42.73	42.77	42.85	42.89	42.81
6.64	DISCHG	281.81	264.97	249.50	233.98	218.10	200.60	173.49	158.91	145.28	135.79
6.64	ELEV	42.63	41.98	41.49	40.99	40.47	39.94	39.38	39.08	38.80	38.61
7.47	DISCHG	126.89	119.71	113.17	107.52	102.36	97.73	93.51	88.17	80.14	74.82
7.47	ELEV	38.42	38.28	38.14	38.03	37.89	37.76	37.64	37.49	37.27	37.12
8.30	DISCHG	70.65	66.73	63.19	60.31	58.07	56.36	55.06	54.06	53.28	52.65
8.30	ELEV	37.00	36.89	36.79	36.71	36.65	36.60	36.56	36.53	36.51	36.49
9.13	DISCHG	52.15	51.73	51.38	51.07	50.80	50.55	50.33	50.12	49.92	49.73
9.13	ELEV	36.48	36.47	36.46	36.45	36.44	36.43	36.43	36.42	36.42	36.41
9.96	DISCHG	49.54	49.11	47.79	47.05	46.54	45.97	45.43	44.97	44.65	44.34
9.96	ELEV	36.41	36.39	36.36	36.34	36.32	36.31	36.29	36.28	36.27	36.26
10.79	DISCHG	44.03	43.68	43.40	43.18	43.06	42.89	42.69	42.42	42.21	42.03
10.79	ELEV	36.25	36.24	36.23	36.23	36.22	36.22	36.21	36.21	36.20	36.20
11.62	DISCHG	41.94	41.80	41.63	41.38	41.18	41.02	40.95	40.82	40.66	40.32
11.62	ELEV	36.19	36.19	36.18	36.18	36.17	36.17	36.17	36.16	36.16	36.15
12.45	DISCHG	39.72	38.84	37.85	36.69	35.47	34.18	33.00	31.88	30.49	29.38
12.45	ELEV	36.13	36.11	36.08	36.05	36.01	35.96	35.91	35.86	35.81	35.76
13.28	DISCHG	28.45	27.53	26.72	26.03	25.50	25.00	24.52	24.01	23.60	23.23
13.28	ELEV	35.72	35.68	35.65	35.62	35.59	35.57	35.55	35.53	35.51	35.50
14.11	DISCHG	22.72	22.32	22.00	21.71	21.44	21.19	20.97	20.76	20.58	20.42
14.11	ELEV	35.47	35.46	35.44	35.43	35.42	35.41	35.40	35.39	35.38	35.38
14.94	DISCHG	20.28	20.11	19.51	19.12	18.87	18.64	18.41	18.18	17.97	17.78
14.94	ELEV	35.37	35.36	35.34	35.32	35.31	35.30	35.29	35.28	35.27	35.26
15.77	DISCHG	17.62	17.46	17.32	17.19	17.08	16.97	16.86	16.77	16.68	16.61

15.77	ELEV	35.26	35.25	35.25	35.24	35.23	35.23	35.23	35.22	35.22	35.21
16.60	DISCHG	16.53	16.47	16.41	16.36	16.31	16.27	16.23	16.20	16.17	16.14
16.60	ELEV	35.21	35.21	35.21	35.20	35.20	35.20	35.20	35.20	35.20	35.19
17.43	DISCHG	16.12	16.10	16.08	16.06	16.05	16.04	16.03	16.02	16.01	16.01
17.43	ELEV	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19
18.26	DISCHG	16.01	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
18.26	ELEV	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19
19.09	DISCHG	16.00	16.01	16.01	16.01	16.02	16.02	16.02	16.03	16.03	16.03
19.09	ELEV	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19	35.19
19.92	DISCHG	16.04	16.03	15.09	14.23	13.82	13.41	12.97	12.55	12.23	11.95
19.92	ELEV	35.19	35.19	35.15	35.11	35.10	35.08	35.06	35.04	35.03	35.02

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20.75	DISCHG	11.66	11.32	11.00	10.74	10.58	10.42	10.24	9.99	9.75	9.57
20.75	ELEV	35.00	34.98	34.95	34.93	34.92	34.90	34.89	34.86	34.84	34.83
21.58	DISCHG	9.48	9.40	9.29	9.11	8.95	8.83	8.80	8.78	8.73	8.61
21.58	ELEV	34.82	34.81	34.80	34.79	34.77	34.76	34.76	34.76	34.76	34.74
22.41	DISCHG	8.48	8.41	8.43	8.45	8.43	8.34	8.25	8.20	8.24	8.28
22.41	ELEV	34.73	34.73	34.73	34.73	34.73	34.72	34.71	34.71	34.71	34.72
23.24	DISCHG	8.28	8.21	8.13	8.10	8.14	8.20	8.22	8.16	8.08	8.06
23.24	ELEV	34.72	34.71	34.70	34.70	34.70	34.71	34.71	34.71	34.70	34.70
24.07	DISCHG	7.34	6.32	5.82	5.47	5.08	4.67	4.28	3.93	3.62	3.33
24.07	ELEV	34.64	34.55	34.50	34.47	34.44	34.40	34.37	34.34	34.31	34.29

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 970.02 CFS-HRS, 80.16 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.01	511.47	(NULL)
6.46	310.52	(NULL)
19.93	16.04	(NULL)
23.71	8.22	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	5.52	83.28	199.20
5.81	DISCHG	307.62	405.92	502.52	493.08	334.10	293.02	297.06	306.02	310.32	301.33
6.64	DISCHG	281.81	264.97	249.50	233.98	218.10	200.60	173.49	158.91	145.28	135.79
7.47	DISCHG	126.89	119.71	113.17	107.52	102.36	97.73	93.51	88.17	80.14	74.82
8.30	DISCHG	70.65	66.73	63.19	60.31	58.07	56.36	55.06	54.06	53.28	52.65
9.13	DISCHG	52.15	51.73	51.38	51.07	50.80	50.55	50.33	50.12	49.92	49.73
9.96	DISCHG	49.54	49.11	47.79	47.05	46.54	45.97	45.43	44.97	44.65	44.34
10.79	DISCHG	44.03	43.68	43.40	43.18	43.06	42.89	42.69	42.42	42.21	42.03
11.62	DISCHG	41.94	41.80	41.63	41.38	41.18	41.02	40.95	40.82	40.66	40.32
12.45	DISCHG	39.72	38.84	37.85	36.69	35.47	34.18	33.00	31.88	30.49	29.38
13.28	DISCHG	28.45	27.53	26.72	26.03	25.50	25.00	24.52	24.01	23.60	23.23
14.11	DISCHG	22.72	22.32	22.00	21.71	21.44	21.19	20.97	20.76	20.58	20.42
14.94	DISCHG	20.28	20.11	19.51	19.12	18.87	18.64	18.41	18.18	17.97	17.78
15.77	DISCHG	17.62	17.46	17.32	17.19	17.08	16.97	16.86	16.77	16.68	16.61
16.60	DISCHG	16.53	16.47	16.41	16.36	16.31	16.27	16.23	16.20	16.17	16.14
17.43	DISCHG	16.12	16.10	16.08	16.06	16.05	16.04	16.03	16.02	16.01	16.01
18.26	DISCHG	16.01	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
19.09	DISCHG	16.00	16.01	16.01	16.01	16.02	16.02	16.02	16.03	16.03	16.03
19.92	DISCHG	16.04	16.03	15.09	14.23	13.82	13.41	12.97	12.55	12.23	11.95
20.75	DISCHG	11.66	11.32	11.00	10.74	10.58	10.42	10.24	9.99	9.75	9.57
21.58	DISCHG	9.48	9.40	9.29	9.11	8.95	8.83	8.80	8.78	8.73	8.61
22.41	DISCHG	8.48	8.41	8.43	8.45	8.43	8.34	8.25	8.20	8.24	8.28
23.24	DISCHG	8.28	8.21	8.13	8.10	8.14	8.20	8.22	8.16	8.08	8.06
24.07	DISCHG	7.34	6.32	5.82	5.47	5.08	4.67	4.28	3.93	3.62	3.33

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 970.02 CFS-HRS, 80.16 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)

6.15	411.15	(NULL)
20.04	16.08	(NULL)
23.83	8.19	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.16 WATERSHED INCHES, 968.06 CFS-HRS, 80.00 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.02	161.61	(RUNOFF)
7.93	6.49	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.55 WATERSHED INCHES, 112.04 CFS-HRS, 9.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.98	189.45	(RUNOFF)
7.93	6.82	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.60 WATERSHED INCHES, 141.91 CFS-HRS, 11.73 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	522.02	(NULL)
19.96	17.74	(NULL)
23.80	9.07	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .76 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	1.74	23.24	94.26
5.81	DISCHG	197.43	309.24	419.54	512.98	505.15	425.41	372.88	346.88	336.12	331.31
6.64	DISCHG	322.89	309.87	295.88	281.52	266.78	251.37	234.07	212.69	194.19	177.69
7.47	DISCHG	163.93	152.08	142.04	133.36	125.86	119.27	113.44	108.05	101.51	94.06
8.30	DISCHG	87.71	82.30	77.51	73.21	69.47	66.32	63.73	61.63	59.97	58.64
9.13	DISCHG	57.59	56.75	56.07	55.52	55.07	54.68	54.35	54.06	53.81	53.57
9.96	DISCHG	53.36	53.12	52.54	51.56	50.73	50.03	49.39	48.80	48.28	47.86
10.79	DISCHG	47.46	47.08	46.70	46.37	46.10	45.91	45.71	45.49	45.24	45.01
11.62	DISCHG	44.83	44.70	44.55	44.38	44.16	43.96	43.79	43.68	43.55	43.39
12.45	DISCHG	43.14	42.77	42.22	41.51	40.63	39.59	38.44	37.28	36.05	34.71
13.28	DISCHG	33.48	32.35	31.30	30.35	29.52	28.83	28.20	27.61	27.04	26.53

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14.11	DISCHG	26.04	25.51	25.04	24.64	24.28	23.96	23.66	23.40	23.16	22.94
14.94	DISCHG	22.74	22.56	22.30	21.82	21.40	21.06	20.77	20.50	20.25	20.02
15.77	DISCHG	19.80	19.61	19.43	19.26	19.11	18.98	18.85	18.73	18.62	18.52
16.60	DISCHG	18.43	18.35	18.27	18.20	18.14	18.08	18.03	17.99	17.95	17.91
17.43	DISCHG	17.88	17.85	17.82	17.80	17.78	17.77	17.75	17.74	17.73	17.72
18.26	DISCHG	17.71	17.71	17.70	17.70	17.69	17.69	17.69	17.69	17.69	17.69
19.09	DISCHG	17.70	17.70	17.70	17.70	17.70	17.71	17.71	17.71	17.72	17.72
19.92	DISCHG	17.72	17.73	17.57	16.85	16.10	15.52	15.00	14.52	14.08	13.71
20.75	DISCHG	13.38	13.05	12.69	12.34	12.05	11.83	11.63	11.43	11.18	10.93
21.58	DISCHG	10.73	10.60	10.48	10.36	10.18	10.01	9.88	9.81	9.76	9.70
22.41	DISCHG	9.58	9.47	9.38	9.36	9.36	9.33	9.26	9.18	9.12	9.13
23.24	DISCHG	9.15	9.15	9.10	9.03	9.00	9.01	9.05	9.06	9.02	8.97
24.07	DISCHG	8.83	8.18	7.36	6.73	6.23	5.78	5.35	4.93	4.55	4.19

RUNOFF VOLUME ABOVE BASEFLOW = 2.20 WATERSHED INCHES, 1080.10 CFS-HRS, 89.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	693.65	(NULL)
19.96	19.48	(NULL)
23.79	9.95	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.30 WATERSHED INCHES, 1222.02 CFS-HRS, 100.99 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	629.13	(NULL)
20.05	19.46	(NULL)
23.90	9.93	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.30 WATERSHED INCHES, 1221.04 CFS-HRS, 100.91 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.05	210.24	(RUNOFF)
7.93	9.55	(RUNOFF)
9.93	4.85	(RUNOFF)
19.89	2.51	(RUNOFF)
23.82	1.29	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.47 WATERSHED INCHES, 162.41 CFS-HRS, 13.42 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	302.31	(RUNOFF)
9.93	8.03	(RUNOFF)
13.85	5.35	(RUNOFF)
19.92	4.16	(RUNOFF)
23.87	2.12	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.47 WATERSHED INCHES, 269.09 CFS-HRS, 22.24 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	504.92	73.91
9.93	12.87	70.14
12.85	9.84	70.11
13.83	8.59	70.09
19.90	6.67	70.07
23.84	3.40	70.04

RUNOFF VOLUME ABOVE BASEFLOW = 2.47 WATERSHED INCHES, 431.50 CFS-HRS, 35.66 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	99.97	71.06

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

4.98	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.01	70.03
5.81	ELEV	70.10	70.21	70.37	70.56	70.76	70.91	71.01	71.04	71.06	71.06
6.64	ELEV	71.06	71.05	71.04	71.03	71.01	71.00	70.97	70.95	70.92	70.90
7.47	ELEV	70.87	70.85	70.83	70.80	70.78	70.76	70.74	70.72	70.70	70.68
8.30	ELEV	70.66	70.64	70.62	70.60	70.59	70.57	70.55	70.53	70.52	70.50
9.13	ELEV	70.49	70.47	70.46	70.44	70.43	70.42	70.41	70.40	70.39	70.38
9.96	ELEV	70.37	70.36	70.35	70.34	70.33	70.32	70.31	70.30	70.30	70.29
10.79	ELEV	70.28	70.27	70.27	70.26	70.25	70.25	70.24	70.24	70.23	70.23

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11.62	ELEV	70.22	70.22	70.21	70.21	70.20	70.20	70.20	70.19	70.19	70.18
12.45	ELEV	70.18	70.18	70.18	70.17	70.17	70.17	70.16	70.16	70.16	70.16
13.28	ELEV	70.16	70.15	70.15	70.15	70.15	70.14	70.14	70.14	70.14	70.14
14.11	ELEV	70.13	70.13	70.13	70.13	70.13	70.13	70.12	70.12	70.12	70.12
14.94	ELEV	70.12	70.12	70.12	70.11	70.11	70.11	70.11	70.11	70.11	70.11
15.77	ELEV	70.10	70.10	70.10	70.10	70.10	70.10	70.10	70.10	70.09	70.09
16.60	ELEV	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.09
17.43	ELEV	70.09	70.09	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08
18.26	ELEV	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08
19.09	ELEV	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08
19.92	ELEV	70.08	70.08	70.08	70.08	70.07	70.07	70.07	70.07	70.07	70.07
20.75	ELEV	70.07	70.07	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06
21.58	ELEV	70.06	70.06	70.06	70.05	70.05	70.05	70.05	70.05	70.05	70.05
22.41	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
23.24	ELEV	70.05	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04
24.07	ELEV	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.03	70.03	70.03

RUNOFF VOLUME ABOVE BASEFLOW = 2.43 WATERSHED INCHES, 425.75 CFS-HRS, 35.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.97	91.81	(RUNOFF)
7.93	3.49	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.92 WATERSHED INCHES, 64.03 CFS-HRS, 5.29 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 61

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	135.82	(NULL)
6.51	108.20	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.49 WATERSHED INCHES, 489.78 CFS-HRS, 40.48 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.78	103.73	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.48 WATERSHED INCHES, 488.37 CFS-HRS, 40.36 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	375.29	(RUNOFF)
9.92	8.52	(RUNOFF)
13.85	5.62	(RUNOFF)
19.89	4.33	(RUNOFF)
23.87	2.20	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.19 WATERSHED INCHES, 327.61 CFS-HRS, 27.07 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	457.69	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.72 WATERSHED INCHES, 815.97 CFS-HRS, 67.43 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	1071.59	(NULL)
23.85	16.62	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.45 WATERSHED INCHES, 2037.01 CFS-HRS, 168.34 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	1062.01	(NULL)
23.94	16.61	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.45 WATERSHED INCHES, 2036.59 CFS-HRS, 168.30 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	247.63	(RUNOFF)
9.93	5.97	(RUNOFF)
19.90	3.05	(RUNOFF)
23.87	1.55	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.91 WATERSHED INCHES, 217.53 CFS-HRS, 17.98 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	1259.86	(NULL)
23.91	18.16	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.49 WATERSHED INCHES, 2254.13 CFS-HRS, 186.28 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 9 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	1230.93	(NULL)
24.00	18.15	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.49 WATERSHED INCHES, 2252.91 CFS-HRS, 186.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	272.24	(RUNOFF)
9.93	7.10	(RUNOFF)
13.85	4.73	(RUNOFF)
19.91	3.67	(RUNOFF)
23.87	1.87	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.55 WATERSHED INCHES, 241.45 CFS-HRS, 19.95 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION ADDHYD CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	1397.35	(NULL)

FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

TIME(HRS)											
4.15	DISCHG	.00	.00	.00	.00	.00	.00	.02	.07	.14	.23
4.98	DISCHG	.33	.43	.53	.63	.81	1.29	2.16	4.99	18.98	66.81
5.81	DISCHG	174.14	371.39	646.19	942.79	1195.25	1350.83	1393.94	1286.80	1090.84	901.23
6.64	DISCHG	762.03	670.48	612.06	570.22	537.02	509.36	485.29	462.72	440.26	416.58
7.47	DISCHG	391.08	366.47	343.96	324.19	306.98	292.08	279.12	267.67	256.89	246.00
8.30	DISCHG	234.55	221.70	208.23	195.84	185.24	176.24	168.47	161.68	155.72	150.52
9.13	DISCHG	145.98	142.03	138.59	135.58	132.93	130.57	128.45	126.52	124.75	123.11
9.96	DISCHG	121.58	120.12	118.61	116.89	114.89	112.44	109.65	106.98	104.61	102.58
10.79	DISCHG	100.81	99.28	97.90	96.62	95.39	94.21	93.13	92.17	91.29	90.45
11.62	DISCHG	89.60	88.76	87.98	87.28	86.63	86.00	85.34	84.67	84.05	83.49
12.45	DISCHG	82.99	82.48	81.95	81.38	80.78	80.10	79.30	78.32	77.10	75.64
13.28	DISCHG	73.99	72.18	70.24	68.35	66.59	65.01	63.61	62.41	61.36	60.40
14.11	DISCHG	59.45	58.49	57.54	56.60	55.66	54.79	54.03	53.37	52.78	52.26
14.94	DISCHG	51.78	51.34	50.89	50.37	49.73	48.93	47.97	47.02	46.21	45.55
15.77	DISCHG	44.99	44.50	44.07	43.67	43.31	42.98	42.66	42.38	42.11	41.85
16.60	DISCHG	41.62	41.40	41.19	40.99	40.81	40.64	40.48	40.33	40.19	40.06
17.43	DISCHG	39.93	39.82	39.71	39.61	39.52	39.44	39.36	39.28	39.22	39.15
18.26	DISCHG	39.09	39.04	38.98	38.93	38.89	38.85	38.81	38.77	38.74	38.71
19.09	DISCHG	38.68	38.65	38.63	38.60	38.58	38.56	38.54	38.52	38.51	38.49
19.92	DISCHG	38.48	38.46	38.37	38.06	37.42	36.35	34.74	33.00	31.47	30.25
20.75	DISCHG	29.27	28.51	27.89	27.35	26.82	26.29	25.79	25.36	25.01	24.68
21.58	DISCHG	24.34	23.97	23.62	23.32	23.09	22.87	22.64	22.37	22.11	21.91
22.41	DISCHG	21.76	21.63	21.48	21.29	21.11	20.97	20.89	20.83	20.74	20.61
23.24	DISCHG	20.47	20.38	20.35	20.32	20.27	20.17	20.07	20.01	20.00	20.00
24.07	DISCHG	19.91	19.57	18.88	17.80	16.20	14.42	12.85	11.61	10.65	9.85

RUNOFF VOLUME ABOVE BASEFLOW = 2.49 WATERSHED INCHES, 2494.36 CFS-HRS, 206.13 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	383.46	(RUNOFF)
7.93	14.83	(RUNOFF)
9.92	7.46	(RUNOFF)
19.89	3.78	(RUNOFF)
23.80	1.94	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.20 WATERSHED INCHES, 286.66 CFS-HRS, 23.69 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION REACH STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)	
6.25	312.90	(NULL)	
10.09	7.45	(NULL)	
13.94	4.92	(NULL)	
20.00	3.78	(NULL)	
*	*		* FIRST POINT OF FLAT PEAK
24.02	1.91	(NULL)	

RUNOFF VOLUME ABOVE BASEFLOW = 3.19 WATERSHED INCHES, 286.49 CFS-HRS, 23.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	280.08	(RUNOFF)

7.93	10.99	(RUNOFF)
9.92	5.52	(RUNOFF)
19.88	2.80	(RUNOFF)
23.81	1.44	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.19 WATERSHED INCHES, 212.28 CFS-HRS, 17.54 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	494.15	(NULL)
9.92	12.97	(NULL)
12.85	9.80	(NULL)
19.88	6.59	(NULL)
23.84	3.32	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 3.19 WATERSHED INCHES, 498.77 CFS-HRS, 41.22 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	387.14	(NULL)
13.09	9.79	(NULL)
19.92	6.58	(NULL)
+	*	* FIRST POINT OF FLAT PEAK
24.07	3.30	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 3.19 WATERSHED INCHES, 498.37 CFS-HRS, 41.19 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	213.36	(RUNOFF)
9.92	4.32	(RUNOFF)
19.88	2.17	(RUNOFF)
23.87	1.10	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.81 WATERSHED INCHES, 186.93 CFS-HRS, 15.45 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	250.22	(RUNOFF)
9.92	4.60	(RUNOFF)
19.88	2.31	(RUNOFF)
23.82	1.18	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.81 WATERSHED INCHES, 199.15 CFS-HRS, 16.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	479.01	(NULL)
12.91	13.03	(NULL)
19.92	8.75	(NULL)
23.89	4.39	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 3.34 WATERSHED INCHES, 685.30 CFS-HRS, 56.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	508.54	(NULL)
13.00	16.48	(NULL)
20.04	11.06	(NULL)
23.99	5.54	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 3.43 WATERSHED INCHES, 883.61 CFS-HRS, 73.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.94	430.97	(RUNOFF)
6.43	35.86	(RUNOFF)
6.93	21.48	(RUNOFF)
7.93	14.41	(RUNOFF)
9.92	7.14	(RUNOFF)
19.88	3.57	(RUNOFF)
23.71	1.86	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.81 WATERSHED INCHES, 307.50 CFS-HRS, 25.41 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.98	631.99	(NULL)
6.45	544.29	(NULL)
12.70	21.87	(NULL)
19.89	14.62	(NULL)
23.70	7.39	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

3.32	DISCHG	.00	.00	.00	.00	.00	.00	.00	.06	.17	.41
4.15	DISCHG	.79	1.15	1.54	1.97	2.43	2.91	3.40	3.90	4.40	4.88
4.98	DISCHG	5.36	7.47	10.40	11.92	16.08	21.89	25.44	128.42	322.01	405.37
5.81	DISCHG	473.65	548.80	631.25	577.15	449.11	485.83	522.72	540.74	543.47	530.62
6.64	DISCHG	505.05	477.39	443.64	405.74	366.34	325.45	284.91	250.76	220.33	193.41
7.47	DISCHG	170.02	150.01	133.07	118.85	107.01	97.24	89.22	80.75	71.07	65.81
8.30	DISCHG	61.50	57.56	53.94	50.67	47.71	45.01	42.57	40.39	38.45	36.77
9.13	DISCHG	35.33	34.11	33.09	32.25	31.57	31.01	30.57	30.22	29.94	29.72
9.96	DISCHG	29.55	29.09	27.82	27.47	27.17	26.72	26.31	25.90	25.56	25.13
10.79	DISCHG	24.68	24.18	23.79	23.46	23.25	23.00	22.76	22.49	22.32	22.21
11.62	DISCHG	22.20	22.14	22.06	21.91	21.86	21.84	21.91	21.91	21.88	21.78
12.45	DISCHG	21.76	21.77	21.86	21.87	21.86	21.76	21.75	21.69	21.27	21.15
13.28	DISCHG	21.05	20.84	20.68	20.53	20.46	20.31	20.13	19.87	19.71	19.55
14.11	DISCHG	19.21	19.03	18.90	18.76	18.62	18.49	18.36	18.25	18.14	18.04
14.94	DISCHG	17.95	17.83	17.24	17.02	16.89	16.73	16.56	16.37	16.18	15.99
15.77	DISCHG	15.81	15.64	15.47	15.33	15.20	15.09	15.00	14.92	14.85	14.80
16.60	DISCHG	14.75	14.72	14.69	14.67	14.65	14.64	14.63	14.62	14.61	14.61
17.43	DISCHG	14.61	14.61	14.60	14.60	14.60	14.60	14.60	14.60	14.60	14.60
18.26	DISCHG	14.60	14.60	14.61	14.61	14.61	14.61	14.61	14.61	14.61	14.61
19.09	DISCHG	14.61	14.61	14.61	14.62	14.62	14.62	14.62	14.62	14.62	14.62
19.92	DISCHG	14.62	14.62	13.52	12.96	12.75	12.40	12.02	11.62	11.29	10.90
20.75	DISCHG	10.48	9.98	9.54	9.18	8.93	8.69	8.45	8.16	7.95	7.81
21.58	DISCHG	7.77	7.72	7.65	7.51	7.42	7.38	7.43	7.45	7.44	7.35
22.41	DISCHG	7.29	7.28	7.35	7.39	7.39	7.32	7.27	7.26	7.33	7.38
23.24	DISCHG	7.38	7.31	7.26	7.26	7.33	7.38	7.38	7.32	7.26	7.26
24.07	DISCHG	6.42	5.62	5.39	5.13	4.79	4.40	3.99	3.56	3.13	2.71

1

RUNOFF VOLUME ABOVE BASEFLOW = 3.52 WATERSHED INCHES, 1191.11 CFS-HRS, 98.43 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	1916.71	(NULL)
23.55	27.60	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 2.07 SQ.MI.

3.32	DISCHG	.00	.00	.00	.00	.00	.00	.00	.06	.17	.41

4.15	DISCHG	.79	1.15	1.54	1.97	2.43	2.91	3.42	3.97	4.54	5.12
4.98	DISCHG	5.69	7.90	10.92	12.54	16.89	23.18	27.60	133.40	341.00	472.18
5.81	DISCHG	647.79	920.19	1277.44	1519.94	1644.36	1836.65	1916.65	1827.54	1634.32	1431.85
6.64	DISCHG	1267.07	1147.87	1055.69	975.97	903.37	834.81	770.20	713.48	660.58	609.99
7.47	DISCHG	561.10	516.47	477.02	443.04	414.00	389.32	368.34	348.42	327.95	311.81
8.30	DISCHG	296.85	279.25	262.17	246.51	232.95	221.26	211.04	202.06	194.18	187.29
9.13	DISCHG	181.31	176.14	171.68	167.84	164.50	161.59	159.02	156.73	154.68	152.83
9.96	DISCHG	151.13	149.21	146.43	144.36	142.05	139.16	135.96	132.88	130.17	127.70
10.79	DISCHG	125.49	123.46	121.69	120.08	118.64	117.22	115.90	114.66	113.61	112.66
11.62	DISCHG	111.80	110.90	110.03	109.19	108.49	107.84	107.25	106.58	105.93	105.27
12.45	DISCHG	104.75	104.25	103.80	103.25	102.64	101.87	101.05	100.01	98.37	96.79
13.28	DISCHG	95.05	93.02	90.92	88.88	87.05	85.32	83.74	82.28	81.06	79.94
14.11	DISCHG	78.66	77.53	76.44	75.36	74.28	73.28	72.40	71.61	70.92	70.29
14.94	DISCHG	69.73	69.17	68.13	67.39	66.62	65.67	64.52	63.39	62.39	61.54
15.77	DISCHG	60.80	60.14	59.55	59.00	58.51	58.07	57.66	57.29	56.95	56.65
16.60	DISCHG	56.37	56.11	55.88	55.66	55.46	55.28	55.11	54.95	54.80	54.67
17.43	DISCHG	54.54	54.42	54.32	54.22	54.13	54.04	53.96	53.89	53.82	53.76
18.26	DISCHG	53.70	53.64	53.59	53.54	53.50	53.46	53.42	53.38	53.35	53.32
19.09	DISCHG	53.29	53.27	53.24	53.22	53.20	53.18	53.16	53.14	53.13	53.11
19.92	DISCHG	53.10	53.08	51.90	51.02	50.17	48.75	46.76	44.63	42.76	41.15
20.75	DISCHG	39.75	38.49	37.44	36.53	35.75	34.98	34.24	33.53	32.96	32.49
21.58	DISCHG	32.11	31.69	31.27	30.83	30.51	30.25	30.06	29.82	29.55	29.26
22.41	DISCHG	29.05	28.91	28.83	28.68	28.50	28.29	28.16	28.09	28.07	27.98
23.24	DISCHG	27.86	27.70	27.61	27.58	27.60	27.55	27.45	27.33	27.26	27.26
24.07	DISCHG	26.33	25.20	24.27	22.93	20.99	18.82	16.84	15.17	13.78	12.56

RUNOFF VOLUME ABOVE BASEFLOW = 2.75 WATERSHED INCHES, 3685.47 CFS-HRS, 304.57 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	516.27	(RUNOFF)
9.93	12.22	(RUNOFF)
12.90	9.23	(RUNOFF)
19.88	6.19	(RUNOFF)
23.90	3.12	(RUNOFF)

1

RUNOFF VOLUME ABOVE BASEFLOW = 3.34 WATERSHED INCHES, 483.20 CFS-HRS, 39.93 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	383.13	(RUNOFF)
9.93	10.49	(RUNOFF)
12.93	7.94	(RUNOFF)
19.89	5.34	(RUNOFF)
23.91	2.69	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.11 WATERSHED INCHES, 397.26 CFS-HRS, 32.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	347.36	(RUNOFF)
9.92	7.66	(RUNOFF)
12.91	5.77	(RUNOFF)
19.88	3.85	(RUNOFF)
23.91	1.94	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.79 WATERSHED INCHES, 330.23 CFS-HRS, 27.29 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.02	107.50	(RUNOFF)
7.93	4.16	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 3.19 WATERSHED INCHES, 80.38 CFS-HRS, 6.64 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP RECORD ID
+ COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION COMPUT RECORD ID
+ FROM XSECTION 44
+ TO XSECTION 43
STARTING TIME = .00 RAIN DEPTH = 3.20 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .08 HOURS

OPERATION RUNOFF CROSS SECTION 44
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	69.48	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 71.44 CFS-HRS, 5.90 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.59	39.73	64.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 71.21 CFS-HRS, 5.89 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	65.05	(RUNOFF)
7.94	4.02	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 57.01 CFS-HRS, 4.71 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	68.85	(NULL)
6.51	52.23	(NULL)
12.85	3.63	(NULL)
19.93	2.54	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 128.22 CFS-HRS, 10.60 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	128.26	(RUNOFF)
7.93	6.57	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.07 WATERSHED INCHES, 92.81 CFS-HRS, 7.67 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	192.64	64.72
13.70	5.66	58.60
19.92	4.37	58.39

23.80	2.25	58.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 221.02 CFS-HRS, 18.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.20	33.67	63.67
19.97	4.36	58.39

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .32 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.06	.95
4.98	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.71	57.85
5.81	DISCHG	4.74	13.39	27.14	28.52	29.89	30.85	31.43	31.83	32.19	32.52
5.81	ELEV	58.45	59.82	62.04	62.38	62.72	62.96	63.11	63.21	63.30	63.38
6.64	DISCHG	32.83	33.08	33.27	33.43	33.54	33.62	33.67	33.67	33.65	33.59
6.64	ELEV	63.46	63.52	63.57	63.61	63.64	63.66	63.67	63.67	63.66	63.65
7.47	DISCHG	33.52	33.44	33.34	33.23	33.11	32.99	32.86	32.72	32.58	32.41
7.47	ELEV	63.63	63.61	63.58	63.56	63.53	63.50	63.46	63.43	63.39	63.35
8.30	DISCHG	32.24	32.05	31.86	31.67	31.48	31.28	31.08	30.88	30.68	30.48
8.30	ELEV	63.31	63.26	63.22	63.17	63.12	63.07	63.02	62.97	62.92	62.87
9.13	DISCHG	30.28	30.09	29.89	29.69	29.49	29.30	29.10	28.91	28.72	28.53
9.13	ELEV	62.82	62.77	62.72	62.67	62.62	62.57	62.53	62.48	62.43	62.38
9.96	DISCHG	28.34	28.15	27.97	27.78	27.59	27.40	27.21	27.02	24.51	22.13
9.96	ELEV	62.33	62.29	62.24	62.19	62.15	62.10	62.05	62.00	61.60	61.22
10.79	DISCHG	20.05	18.24	16.67	15.29	14.14	13.23	12.42	11.70	11.06	10.49
10.79	ELEV	60.89	60.60	60.35	60.13	59.94	59.80	59.67	59.56	59.45	59.36
11.62	DISCHG	9.99	9.55	9.16	8.82	8.52	8.24	8.00	7.79	7.61	7.45
11.62	ELEV	59.29	59.22	59.15	59.10	59.05	59.01	58.97	58.94	58.91	58.88
12.45	DISCHG	7.31	7.18	7.07	6.97	6.89	6.82	6.75	6.69	6.63	6.56
12.45	ELEV	58.86	58.84	58.82	58.81	58.79	58.78	58.77	58.76	58.75	58.74
13.28	DISCHG	6.48	6.41	6.33	6.26	6.19	6.12	6.07	6.02	5.97	5.92
13.28	ELEV	58.73	58.72	58.70	58.69	58.68	58.67	58.66	58.65	58.65	58.64
14.11	DISCHG	5.87	5.82	5.76	5.71	5.65	5.60	5.56	5.52	5.48	5.44
14.11	ELEV	58.63	58.62	58.61	58.61	58.60	58.59	58.58	58.58	58.57	58.56
14.94	DISCHG	5.41	5.38	5.34	5.29	5.23	5.16	5.10	5.03	4.97	4.92
14.94	ELEV	58.56	58.55	58.55	58.54	58.53	58.52	58.51	58.50	58.49	58.48
15.77	DISCHG	4.86	4.81	4.76	4.72	4.68	4.64	4.60	4.57	4.54	4.52
15.77	ELEV	58.47	58.46	58.46	58.45	58.44	58.44	58.43	58.43	58.42	58.42
16.60	DISCHG	4.49	4.47	4.45	4.44	4.42	4.41	4.40	4.39	4.38	4.37
16.60	ELEV	58.41	58.41	58.41	58.40	58.40	58.40	58.40	58.40	58.39	58.39
17.43	DISCHG	4.36	4.36	4.35	4.35	4.34	4.34	4.34	4.34	4.34	4.34
17.43	ELEV	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39

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18.26	DISCHG	4.33	4.33	4.33	4.33	4.34	4.34	4.34	4.34	4.34	4.34
18.26	ELEV	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39
19.09	DISCHG	4.34	4.34	4.34	4.35	4.35	4.35	4.35	4.35	4.35	4.36
19.09	ELEV	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39	58.39
19.92	DISCHG	4.36	4.36	4.35	4.31	4.22	4.10	3.98	3.86	3.73	3.62
19.92	ELEV	58.39	58.39	58.39	58.38	58.37	58.35	58.33	58.31	58.29	58.27
20.75	DISCHG	3.51	3.41	3.31	3.21	3.12	3.03	2.95	2.88	2.82	2.75
20.75	ELEV	58.26	58.24	58.22	58.21	58.19	58.18	58.17	58.16	58.15	58.14
21.58	DISCHG	2.69	2.64	2.60	2.56	2.52	2.49	2.45	2.42	2.40	2.38
21.58	ELEV	58.13	58.12	58.11	58.11	58.10	58.09	58.09	58.08	58.08	58.08
22.41	DISCHG	2.36	2.34	2.33	2.31	2.30	2.29	2.28	2.27	2.26	2.25
22.41	ELEV	58.07	58.07	58.07	58.07	58.06	58.06	58.06	58.06	58.06	58.06
23.24	DISCHG	2.25	2.25	2.25	2.24	2.23	2.23	2.23	2.23	2.23	2.23
23.24	ELEV	58.06	58.06	58.06	58.06	58.05	58.05	58.05	58.05	58.05	58.05
24.07	DISCHG	2.21	2.17	2.08	1.96	1.83	1.71	1.58	1.47	1.35	1.24
24.07	ELEV	58.05	58.04	58.03	58.01	57.99	57.97	57.95	57.93	57.91	57.90

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 220.01 CFS-HRS, 18.18 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	69.95	(RUNOFF)
7.94	3.62	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.37 WATERSHED INCHES, 55.87 CFS-HRS, 4.62 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.98	32.90	(NULL)
20.13	4.35	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.05 WATERSHED INCHES, 219.21 CFS-HRS, 18.12 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	36.76	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.37 WATERSHED INCHES, 55.70 CFS-HRS, 4.60 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	91.61	(RUNOFF)
7.93	5.98	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.16 WATERSHED INCHES, 87.02 CFS-HRS, 7.19 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	116.82	(RUNOFF)
7.93	5.26	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.34 WATERSHED INCHES, 80.41 CFS-HRS, 6.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	102.49	82.68
7.95	38.87	80.39
19.97	6.01	79.22
23.81	3.10	79.11

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

TIME(HRS)											
4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.49	4.44
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.02	79.16
5.81	DISCHG	15.66	36.67	63.97	90.57	102.42	93.94	76.91	61.28	52.26	47.31
5.81	ELEV	79.56	80.32	81.29	82.25	82.67	82.37	81.76	81.20	80.87	80.70
6.64	DISCHG	44.40	42.22	40.76	39.90	39.63	39.61	39.52	39.20	38.86	38.67
6.64	ELEV	80.59	80.51	80.46	80.43	80.42	80.42	80.42	80.41	80.39	80.39
7.47	DISCHG	38.61	38.64	38.70	38.76	38.82	38.85	38.87	38.83	38.51	37.87
7.47	ELEV	80.38	80.39	80.39	80.39	80.39	80.39	80.39	80.39	80.38	80.36
8.30	DISCHG	37.13	36.50	36.06	35.75	35.50	35.29	35.10	34.92	34.74	34.56
8.30	ELEV	80.33	80.31	80.29	80.28	80.27	80.27	80.26	80.25	80.25	80.24
9.13	DISCHG	34.38	34.20	34.02	33.83	33.65	33.46	33.28	33.09	32.90	32.71
9.13	ELEV	80.23	80.23	80.22	80.21	80.21	80.20	80.19	80.19	80.18	80.17
9.96	DISCHG	32.52	32.32	32.08	31.75	31.39	31.06	30.77	30.52	30.29	29.69
9.96	ELEV	80.17	80.16	80.15	80.14	80.13	80.11	80.10	80.09	80.09	80.06
10.79	DISCHG	28.79	27.69	26.46	25.17	23.87	22.60	21.40	20.27	19.19	18.19
10.79	ELEV	80.03	79.99	79.95	79.90	79.86	79.81	79.77	79.73	79.69	79.65
11.62	DISCHG	17.27	16.42	15.66	14.95	14.30	13.70	13.17	12.69	12.26	11.88
11.62	ELEV	79.62	79.59	79.56	79.54	79.51	79.49	79.47	79.46	79.44	79.43
12.45	DISCHG	11.52	11.20	10.91	10.66	10.44	10.25	10.07	9.89	9.72	9.54
12.45	ELEV	79.41	79.40	79.39	79.38	79.37	79.37	79.36	79.35	79.35	79.34
13.28	DISCHG	9.36	9.20	9.05	8.92	8.80	8.71	8.63	8.55	8.47	8.39
13.28	ELEV	79.34	79.33	79.32	79.32	79.32	79.31	79.31	79.31	79.30	79.30
14.11	DISCHG	8.30	8.21	8.11	8.02	7.95	7.88	7.82	7.76	7.70	7.65

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14.11	ELEV	79.30	79.29	79.29	79.29	79.29	79.28	79.28	79.28	79.28	79.27
14.94	DISCHG	7.60	7.56	7.49	7.40	7.28	7.17	7.08	7.00	6.93	6.87
14.94	ELEV	79.27	79.27	79.27	79.27	79.26	79.26	79.25	79.25	79.25	79.25
15.77	DISCHG	6.81	6.75	6.69	6.64	6.59	6.54	6.49	6.45	6.40	6.36
15.77	ELEV	79.24	79.24	79.24	79.24	79.24	79.23	79.23	79.23	79.23	79.23
16.60	DISCHG	6.33	6.29	6.26	6.23	6.20	6.17	6.15	6.13	6.11	6.09
16.60	ELEV	79.23	79.23	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22
17.43	DISCHG	6.08	6.06	6.05	6.04	6.03	6.02	6.02	6.01	6.00	6.00
17.43	ELEV	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22
18.26	DISCHG	6.00	5.99	5.99	5.99	5.99	5.99	5.98	5.98	5.98	5.98
18.26	ELEV	79.22	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
19.09	DISCHG	5.99	5.99	5.99	5.99	5.99	5.99	5.99	6.00	6.00	6.00
19.09	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.22	79.22	79.22
19.92	DISCHG	6.00	6.00	5.97	5.86	5.67	5.48	5.31	5.17	5.05	4.95
19.92	ELEV	79.22	79.22	79.21	79.21	79.20	79.20	79.19	79.19	79.18	79.18
20.75	DISCHG	4.86	4.78	4.68	4.58	4.47	4.38	4.30	4.22	4.13	4.04
20.75	ELEV	79.17	79.17	79.17	79.16	79.16	79.16	79.15	79.15	79.15	79.14
21.58	DISCHG	3.95	3.88	3.82	3.76	3.70	3.63	3.57	3.52	3.48	3.44
21.58	ELEV	79.14	79.14	79.14	79.13	79.13	79.13	79.13	79.13	79.12	79.12
22.41	DISCHG	3.41	3.36	3.32	3.29	3.27	3.26	3.24	3.21	3.18	3.16
22.41	ELEV	79.12	79.12	79.12	79.12	79.12	79.12	79.12	79.12	79.11	79.11
23.24	DISCHG	3.16	3.16	3.15	3.13	3.11	3.10	3.10	3.10	3.10	3.09
23.24	ELEV	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11
24.07	DISCHG	3.05	2.94	2.75	2.54	2.36	2.22	2.10	2.00	1.90	1.80
24.07	ELEV	79.11	79.11	79.10	79.09	79.08	79.08	79.08	79.07	79.07	79.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.08 WATERSHED INCHES, 306.23 CFS-HRS, 25.31 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	102.33	82.67
7.96	38.87	80.39
19.97	6.00	79.22
23.82	3.10	79.11

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.38	3.62
4.98	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.01	79.13
5.81	DISCHG	13.62	33.13	59.86	86.93	101.81	96.17	79.46	63.35	53.12	47.93
5.81	ELEV	79.49	80.19	81.15	82.12	82.65	82.45	81.85	81.27	80.91	80.72
6.64	DISCHG	44.70	42.54	40.90	40.01	39.63	39.62	39.53	39.26	38.90	38.69
6.64	ELEV	80.60	80.53	80.47	80.43	80.42	80.42	80.42	80.41	80.40	80.39
7.47	DISCHG	38.61	38.63	38.69	38.75	38.81	38.85	38.87	38.84	38.57	37.98
7.47	ELEV	80.38	80.39	80.39	80.39	80.39	80.39	80.39	80.39	80.38	80.36
8.30	DISCHG	37.24	36.58	36.11	35.79	35.53	35.32	35.12	34.94	34.76	34.59
8.30	ELEV	80.34	80.31	80.30	80.28	80.27	80.27	80.26	80.25	80.25	80.24
9.13	DISCHG	34.41	34.23	34.04	33.86	33.68	33.49	33.30	33.12	32.93	32.74

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9.13	ELEV	80.23	80.23	80.22	80.21	80.21	80.20	80.19	80.19	80.18	80.17
9.96	DISCHG	32.55	32.35	32.11	31.80	31.44	31.11	30.81	30.55	30.32	29.81
9.96	ELEV	80.17	80.16	80.15	80.14	80.13	80.12	80.11	80.10	80.09	80.07
10.79	DISCHG	28.93	27.86	26.64	25.36	24.05	22.78	21.57	20.43	19.34	18.33
10.79	ELEV	80.04	80.00	79.96	79.91	79.86	79.82	79.77	79.73	79.69	79.66
11.62	DISCHG	17.39	16.54	15.76	15.05	14.39	13.79	13.24	12.75	12.32	11.93
11.62	ELEV	79.62	79.59	79.57	79.54	79.52	79.49	79.47	79.46	79.44	79.43
12.45	DISCHG	11.57	11.24	10.95	10.69	10.47	10.28	10.09	9.92	9.75	9.57
12.45	ELEV	79.41	79.40	79.39	79.38	79.38	79.37	79.36	79.36	79.35	79.34
13.28	DISCHG	9.39	9.22	9.07	8.93	8.82	8.72	8.64	8.56	8.48	8.40
13.28	ELEV	79.34	79.33	79.33	79.32	79.32	79.31	79.31	79.31	79.30	79.30
14.11	DISCHG	8.31	8.22	8.13	8.04	7.96	7.89	7.82	7.77	7.71	7.66
14.11	ELEV	79.30	79.29	79.29	79.29	79.29	79.28	79.28	79.28	79.28	79.27
14.94	DISCHG	7.61	7.56	7.50	7.41	7.30	7.19	7.09	7.01	6.94	6.88
14.94	ELEV	79.27	79.27	79.27	79.27	79.26	79.26	79.25	79.25	79.25	79.25
15.77	DISCHG	6.82	6.76	6.70	6.65	6.60	6.55	6.50	6.45	6.41	6.37
15.77	ELEV	79.24	79.24	79.24	79.24	79.24	79.23	79.23	79.23	79.23	79.23
16.60	DISCHG	6.33	6.30	6.26	6.23	6.20	6.18	6.15	6.13	6.11	6.10
16.60	ELEV	79.23	79.23	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22
17.43	DISCHG	6.08	6.07	6.05	6.04	6.03	6.02	6.02	6.01	6.00	6.00
17.43	ELEV	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22	79.22
18.26	DISCHG	6.00	5.99	5.99	5.99	5.99	5.99	5.98	5.98	5.98	5.98

18.26	ELEV	79.22	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.21
19.09	DISCHG	5.99	5.99	5.99	5.99	5.99	5.99	5.99	6.00	6.00	6.00
19.09	ELEV	79.21	79.21	79.21	79.21	79.21	79.21	79.21	79.22	79.22	79.22
19.92	DISCHG	6.00	6.00	5.98	5.88	5.70	5.51	5.33	5.19	5.07	4.97
19.92	ELEV	79.22	79.22	79.21	79.21	79.20	79.20	79.19	79.19	79.18	79.18
20.75	DISCHG	4.88	4.79	4.69	4.59	4.49	4.39	4.31	4.23	4.14	4.05
20.75	ELEV	79.17	79.17	79.17	79.16	79.16	79.16	79.15	79.15	79.15	79.15
21.58	DISCHG	3.97	3.89	3.82	3.77	3.70	3.64	3.57	3.52	3.48	3.45
21.58	ELEV	79.14	79.14	79.14	79.14	79.13	79.13	79.13	79.13	79.12	79.12
22.41	DISCHG	3.41	3.37	3.33	3.30	3.27	3.26	3.24	3.21	3.19	3.17
22.41	ELEV	79.12	79.12	79.12	79.12	79.12	79.12	79.12	79.12	79.11	79.11
23.24	DISCHG	3.16	3.16	3.15	3.13	3.11	3.10	3.10	3.10	3.10	3.09
23.24	ELEV	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11	79.11
24.07	DISCHG	3.05	2.96	2.78	2.57	2.38	2.24	2.12	2.01	1.91	1.81
24.07	ELEV	79.11	79.11	79.10	79.09	79.09	79.08	79.08	79.07	79.07	79.06

RUNOFF VOLUME ABOVE BASEFLOW = 1.08 WATERSHED INCHES, 306.22 CFS-HRS, 25.31 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	120.95	(NULL)
6.41	50.54	(NULL)
19.96	2.42	(NULL)
23.76	1.23	(NULL)

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TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .16 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.03	3.76	23.29
5.81	DISCHG	53.38	82.33	107.67	119.38	83.14	54.21	49.40	50.50	50.08	47.12
6.64	DISCHG	41.75	36.79	33.04	29.92	27.19	24.59	21.53	18.96	17.21	15.85
7.47	DISCHG	14.70	13.70	12.85	12.14	11.55	11.07	10.68	10.21	8.90	7.78
8.30	DISCHG	7.25	6.92	6.60	6.29	6.00	5.75	5.53	5.35	5.20	5.07
9.13	DISCHG	4.97	4.89	4.82	4.77	4.72	4.69	4.66	4.64	4.62	4.61
9.96	DISCHG	4.60	4.56	4.32	4.08	3.98	3.91	3.84	3.78	3.74	3.71
10.79	DISCHG	3.67	3.61	3.57	3.54	3.53	3.54	3.53	3.50	3.47	3.46
11.62	DISCHG	3.47	3.49	3.49	3.48	3.45	3.45	3.47	3.49	3.49	3.48
12.45	DISCHG	3.46	3.45	3.47	3.49	3.50	3.49	3.47	3.46	3.39	3.30
13.28	DISCHG	3.26	3.23	3.19	3.16	3.15	3.16	3.15	3.12	3.08	3.07
14.11	DISCHG	3.02	2.97	2.94	2.93	2.92	2.90	2.89	2.88	2.87	2.86
14.94	DISCHG	2.86	2.85	2.76	2.65	2.59	2.57	2.54	2.52	2.50	2.48
15.77	DISCHG	2.46	2.44	2.43	2.42	2.41	2.40	2.40	2.39	2.39	2.39
16.60	DISCHG	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38
17.43	DISCHG	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.39
18.26	DISCHG	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39	2.39
19.09	DISCHG	2.39	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40	2.40
19.92	DISCHG	2.40	2.40	2.27	1.97	1.81	1.73	1.66	1.59	1.54	1.51
20.75	DISCHG	1.47	1.42	1.36	1.32	1.30	1.31	1.30	1.28	1.25	1.23
21.58	DISCHG	1.23	1.24	1.25	1.24	1.21	1.20	1.20	1.23	1.24	1.23
22.41	DISCHG	1.21	1.19	1.20	1.22	1.23	1.23	1.20	1.19	1.19	1.22
23.24	DISCHG	1.23	1.23	1.20	1.19	1.19	1.22	1.23	1.23	1.20	1.19
24.07	DISCHG	1.10	.80	.60	.53	.47	.41	.36	.30	.25	.21

RUNOFF VOLUME ABOVE BASEFLOW = 1.35 WATERSHED INCHES, 136.11 CFS-HRS, 11.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	91.35	(NULL)
8.09	38.84	(NULL)
20.06	6.00	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.08 WATERSHED INCHES, 305.91 CFS-HRS, 25.28 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	162.94	(NULL)
6.28	141.14	(NULL)
19.96	8.42	(NULL)
23.71	4.34	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.15 WATERSHED INCHES, 442.02 CFS-HRS, 36.53 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.96	136.48	(RUNOFF)
6.44	13.60	(RUNOFF)
6.93	8.35	(RUNOFF)
7.93	5.75	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.34 WATERSHED INCHES, 86.46 CFS-HRS, 7.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.01	271.16	42.25
19.94	9.94	34.86
23.71	5.15	34.45

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.69 SQ.MI.
4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.05	18.59	77.60
4.98	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	35.30	37.19
5.81	DISCHG	144.15	206.04	265.32	260.66	174.85	154.45	154.02	148.74	136.72	121.09
5.81	ELEV	38.78	40.09	41.99	41.84	39.41	38.99	38.98	38.87	38.63	38.30
6.64	DISCHG	104.92	94.22	86.82	81.20	76.84	72.43	67.33	64.29	62.25	60.59
6.64	ELEV	37.96	37.66	37.45	37.30	37.17	37.05	36.91	36.82	36.76	36.72
7.47	DISCHG	59.18	58.04	57.14	56.45	55.91	55.48	55.14	53.93	50.88	49.35
7.47	ELEV	36.68	36.65	36.62	36.60	36.59	36.57	36.56	36.53	36.44	36.40
8.30	DISCHG	48.40	47.49	46.56	45.71	45.00	44.42	43.93	43.53	43.17	42.86
8.30	ELEV	36.37	36.35	36.32	36.30	36.28	36.26	36.25	36.24	36.23	36.22
9.13	DISCHG	42.58	42.32	42.07	41.84	41.62	41.40	41.19	40.99	40.78	40.59
9.13	ELEV	36.21	36.20	36.20	36.19	36.18	36.18	36.17	36.17	36.16	36.16
9.96	DISCHG	40.39	40.04	39.13	38.59	38.20	37.78	37.38	37.02	36.74	36.46
9.96	ELEV	36.15	36.14	36.11	36.10	36.09	36.08	36.06	36.05	36.05	36.04
10.79	DISCHG	36.02	35.27	34.33	33.25	32.11	30.87	29.59	28.29	27.07	25.94
10.79	ELEV	36.03	36.01	35.97	35.92	35.87	35.82	35.77	35.71	35.66	35.61
11.62	DISCHG	24.93	23.96	23.04	22.14	21.34	20.63	20.04	19.47	18.94	18.40
11.62	ELEV	35.57	35.53	35.49	35.45	35.42	35.39	35.36	35.34	35.31	35.29
12.45	DISCHG	17.94	17.55	17.26	16.96	16.68	16.38	16.13	15.89	15.47	15.17
12.45	ELEV	35.27	35.25	35.24	35.23	35.22	35.20	35.19	35.18	35.17	35.15
13.28	DISCHG	14.94	14.68	14.46	14.28	14.17	14.05	13.92	13.76	13.63	13.52
13.28	ELEV	35.14	35.13	35.12	35.12	35.11	35.11	35.10	35.09	35.09	35.08
14.11	DISCHG	13.31	13.15	13.03	12.93	12.83	12.73	12.64	12.56	12.49	12.42
14.11	ELEV	35.07	35.07	35.06	35.06	35.05	35.05	35.05	35.04	35.04	35.04
14.94	DISCHG	12.36	12.29	11.94	11.71	11.57	11.45	11.33	11.20	11.09	10.99
14.94	ELEV	35.03	35.03	35.02	35.01	35.00	34.99	34.98	34.97	34.96	34.95
15.77	DISCHG	10.90	10.82	10.75	10.68	10.61	10.55	10.50	10.44	10.39	10.35
15.77	ELEV	34.94	34.94	34.93	34.92	34.92	34.91	34.91	34.90	34.90	34.89

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16.60	DISCHG	10.30	10.26	10.22	10.19	10.15	10.12	10.10	10.07	10.05	10.03
16.60	ELEV	34.89	34.89	34.88	34.88	34.88	34.88	34.87	34.87	34.87	34.87
17.43	DISCHG	10.01	10.00	9.98	9.97	9.96	9.95	9.94	9.93	9.92	9.92
17.43	ELEV	34.87	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
18.26	DISCHG	9.92	9.91	9.91	9.91	9.91	9.91	9.91	9.91	9.91	9.91
18.26	ELEV	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
19.09	DISCHG	9.91	9.91	9.91	9.92	9.92	9.92	9.92	9.93	9.93	9.93
19.09	ELEV	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86	34.86
19.92	DISCHG	9.94	9.93	9.34	8.79	8.54	8.30	8.05	7.81	7.64	7.49
19.92	ELEV	34.86	34.86	34.81	34.76	34.74	34.72	34.70	34.68	34.66	34.65
20.75	DISCHG	7.34	7.15	6.97	6.83	6.76	6.68	6.58	6.43	6.29	6.18
20.75	ELEV	34.63	34.62	34.60	34.59	34.58	34.58	34.57	34.56	34.54	34.53
21.58	DISCHG	6.13	6.08	6.01	5.89	5.78	5.70	5.67	5.65	5.61	5.52
21.58	ELEV	34.53	34.53	34.52	34.51	34.50	34.49	34.49	34.49	34.49	34.48

22.41	DISCHG	5.43	5.38	5.37	5.38	5.36	5.29	5.22	5.19	5.20	5.22
22.41	ELEV	34.47	34.47	34.46	34.47	34.46	34.46	34.45	34.45	34.45	34.45
23.24	DISCHG	5.22	5.17	5.11	5.09	5.11	5.14	5.15	5.11	5.05	5.03
23.24	ELEV	34.45	34.45	34.44	34.44	34.44	34.44	34.45	34.44	34.44	34.44
24.07	DISCHG	4.58	3.92	3.62	3.41	3.19	2.95	2.73	2.54	2.37	2.21
24.07	ELEV	34.40	34.34	34.31	34.29	34.28	34.25	34.24	34.22	34.20	34.19

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 528.47 CFS-HRS, 43.67 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.01	271.16	(NULL)
19.94	9.94	(NULL)
23.71	5.15	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.05	18.59	77.60
5.81	DISCHG	144.15	206.04	265.32	260.66	174.85	154.45	154.02	148.74	136.72	121.09
6.64	DISCHG	104.92	94.22	86.82	81.20	76.84	72.43	67.33	64.29	62.25	60.59
7.47	DISCHG	59.18	58.04	57.14	56.45	55.91	55.48	55.14	53.93	50.88	49.35
8.30	DISCHG	48.40	47.49	46.56	45.71	45.00	44.42	43.93	43.53	43.17	42.86
9.13	DISCHG	42.58	42.32	42.07	41.84	41.62	41.40	41.19	40.99	40.78	40.59
9.96	DISCHG	40.39	40.04	39.13	38.59	38.20	37.78	37.38	37.02	36.74	36.46
10.79	DISCHG	36.02	35.27	34.33	33.25	32.11	30.87	29.59	28.29	27.07	25.94
11.62	DISCHG	24.93	23.96	23.04	22.14	21.34	20.63	20.04	19.47	18.94	18.40
12.45	DISCHG	17.94	17.55	17.26	16.96	16.68	16.38	16.13	15.89	15.47	15.17
13.28	DISCHG	14.94	14.68	14.46	14.28	14.17	14.05	13.92	13.76	13.63	13.52
14.11	DISCHG	13.31	13.15	13.03	12.93	12.83	12.73	12.64	12.56	12.49	12.42
14.94	DISCHG	12.36	12.29	11.94	11.71	11.57	11.45	11.33	11.20	11.09	10.99
15.77	DISCHG	10.90	10.82	10.75	10.68	10.61	10.55	10.50	10.44	10.39	10.35
16.60	DISCHG	10.30	10.26	10.22	10.19	10.15	10.12	10.10	10.07	10.05	10.03
17.43	DISCHG	10.01	10.00	9.98	9.97	9.96	9.95	9.94	9.93	9.92	9.92
18.26	DISCHG	9.92	9.91	9.91	9.91	9.91	9.91	9.91	9.91	9.91	9.91

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19.09	DISCHG	9.91	9.91	9.91	9.92	9.92	9.92	9.92	9.93	9.93	9.93
19.92	DISCHG	9.94	9.93	9.34	8.79	8.54	8.30	8.05	7.81	7.64	7.49
20.75	DISCHG	7.34	7.15	6.97	6.83	6.76	6.68	6.58	6.43	6.29	6.18
21.58	DISCHG	6.13	6.08	6.01	5.89	5.78	5.70	5.67	5.65	5.61	5.52
22.41	DISCHG	5.43	5.38	5.37	5.38	5.36	5.29	5.22	5.19	5.20	5.22
23.24	DISCHG	5.22	5.17	5.11	5.09	5.11	5.14	5.15	5.11	5.05	5.03
24.07	DISCHG	4.58	3.92	3.62	3.41	3.19	2.95	2.73	2.54	2.37	2.21

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 528.47 CFS-HRS, 43.67 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	200.38	(NULL)
20.13	9.95	(NULL)
23.88	5.14	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 527.11 CFS-HRS, 43.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	93.90	(RUNOFF)
7.93	4.08	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.47 WATERSHED INCHES, 64.61 CFS-HRS, 5.34 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.99	125.82	(RUNOFF)
7.93	4.70	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.35 WATERSHED INCHES, 92.64 CFS-HRS, 7.66 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	227.06	(NULL)
19.96	11.03	(NULL)
23.79	5.70	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .76 SQ.MI.

4.98	DISCHG	.00	.00	.00	.00	.00	.00	.00	.11	5.02	23.38
5.81	DISCHG	53.82	99.63	155.55	206.81	223.17	225.40	206.35	190.11	180.44	172.40

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6.64	DISCHG	161.80	149.39	136.07	123.78	113.22	104.20	96.10	89.11	82.95	77.93
7.47	DISCHG	73.96	70.78	68.21	66.13	64.46	63.12	62.06	61.09	59.61	58.05
8.30	DISCHG	56.19	54.51	53.12	51.89	50.78	49.75	48.84	48.03	47.34	46.75
9.13	DISCHG	46.23	45.79	45.40	45.06	44.75	44.47	44.20	43.96	43.72	43.50
9.96	DISCHG	43.29	43.05	42.67	42.23	41.68	41.14	40.66	40.20	39.78	39.39
10.79	DISCHG	39.03	38.68	38.30	37.79	37.16	36.38	35.47	34.44	33.31	32.13
11.62	DISCHG	30.96	29.80	28.69	27.62	26.58	25.60	24.70	23.87	23.11	22.41
12.45	DISCHG	21.75	21.14	20.60	20.12	19.70	19.30	18.94	18.60	18.24	17.89
13.28	DISCHG	17.53	17.18	16.88	16.59	16.34	16.13	15.94	15.77	15.60	15.43
14.11	DISCHG	15.26	15.09	14.91	14.75	14.60	14.47	14.35	14.23	14.13	14.03
14.94	DISCHG	13.95	13.86	13.73	13.57	13.36	13.16	12.98	12.83	12.68	12.54
15.77	DISCHG	12.42	12.30	12.19	12.09	12.00	11.92	11.84	11.77	11.70	11.64
16.60	DISCHG	11.59	11.53	11.48	11.43	11.39	11.35	11.31	11.28	11.24	11.21
17.43	DISCHG	11.19	11.16	11.14	11.12	11.10	11.08	11.07	11.06	11.05	11.04
18.26	DISCHG	11.03	11.02	11.01	11.01	11.01	11.00	11.00	11.00	11.00	11.00
19.09	DISCHG	11.00	11.00	11.00	11.00	11.00	11.00	11.01	11.01	11.01	11.01
19.92	DISCHG	11.02	11.02	10.92	10.70	10.37	10.00	9.67	9.37	9.11	8.86
20.75	DISCHG	8.64	8.44	8.24	8.04	7.86	7.71	7.58	7.46	7.34	7.20
21.58	DISCHG	7.08	6.97	6.88	6.80	6.70	6.60	6.50	6.43	6.37	6.32
22.41	DISCHG	6.25	6.17	6.11	6.06	6.03	6.00	5.95	5.90	5.86	5.83
23.24	DISCHG	5.82	5.80	5.78	5.75	5.71	5.70	5.70	5.70	5.69	5.66
24.07	DISCHG	5.57	5.32	4.99	4.60	4.26	3.96	3.70	3.44	3.20	2.97

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 591.72 CFS-HRS, 48.90 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	328.65	(NULL)
19.96	12.24	(NULL)
23.78	6.31	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.29 WATERSHED INCHES, 684.36 CFS-HRS, 56.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	285.12	(NULL)
20.05	12.22	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.29 WATERSHED INCHES, 683.23 CFS-HRS, 56.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	117.88	(RUNOFF)
7.94	5.95	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.41 WATERSHED INCHES, 92.62 CFS-HRS, 7.65 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	167.13	(RUNOFF)
9.94	5.04	(RUNOFF)
19.94	2.66	(RUNOFF)
23.87	1.36	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.41 WATERSHED INCHES, 153.44 CFS-HRS, 12.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	279.61	72.40
7.93	15.81	70.17
9.93	8.09	70.09
19.91	4.27	70.05
23.84	2.18	70.02

RUNOFF VOLUME ABOVE BASEFLOW = 1.41 WATERSHED INCHES, 246.06 CFS-HRS, 20.33 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.59	54.04	70.59

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

4.98	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.01
5.81	ELEV	70.03	70.08	70.16	70.27	70.38	70.47	70.53	70.57	70.58	70.59
6.64	ELEV	70.59	70.58	70.57	70.56	70.55	70.54	70.53	70.52	70.50	70.49
7.47	ELEV	70.48	70.47	70.45	70.44	70.43	70.42	70.41	70.40	70.39	70.38
8.30	ELEV	70.37	70.36	70.35	70.34	70.33	70.32	70.31	70.30	70.29	70.28
9.13	ELEV	70.28	70.27	70.26	70.25	70.25	70.24	70.23	70.23	70.22	70.22

1

9.96	ELEV	70.21	70.21	70.20	70.20	70.19	70.19	70.18	70.18	70.17	70.17
10.79	ELEV	70.16	70.16	70.16	70.15	70.15	70.15	70.14	70.14	70.14	70.13
11.62	ELEV	70.13	70.13	70.13	70.12	70.12	70.12	70.12	70.11	70.11	70.11
12.45	ELEV	70.11	70.11	70.11	70.10	70.10	70.10	70.10	70.10	70.10	70.10
13.28	ELEV	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.09	70.08	70.08
14.11	ELEV	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.08	70.07	70.07
14.94	ELEV	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07	70.07
15.77	ELEV	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06
16.60	ELEV	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.06	70.05	70.05
17.43	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
18.26	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
19.09	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05
19.92	ELEV	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.05	70.04	70.04
20.75	ELEV	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04	70.04
21.58	ELEV	70.04	70.04	70.04	70.03	70.03	70.03	70.03	70.03	70.03	70.03
22.41	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03

23.24	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03
24.07	ELEV	70.03	70.03	70.03	70.03	70.02	70.02	70.02	70.02	70.02	70.02

RUNOFF VOLUME ABOVE BASEFLOW = 1.39 WATERSHED INCHES, 242.37 CFS-HRS, 20.03 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.99	56.34	(RUNOFF)
7.93	2.28	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.76 WATERSHED INCHES, 38.73 CFS-HRS, 3.20 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION ADDHYD CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	77.77	(NULL)
6.53	59.25	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.43 WATERSHED INCHES, 281.10 CFS-HRS, 23.23 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.87	55.92	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.42 WATERSHED INCHES, 280.04 CFS-HRS, 23.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	233.11	(RUNOFF)
9.93	5.73	(RUNOFF)
19.90	2.94	(RUNOFF)
23.87	1.49	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.99 WATERSHED INCHES, 204.68 CFS-HRS, 16.91 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	275.40	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.62 WATERSHED INCHES, 484.72 CFS-HRS, 40.06 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	549.63	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.41 WATERSHED INCHES, 1167.96 CFS-HRS, 96.52 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	538.88	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.41 WATERSHED INCHES, 1167.72 CFS-HRS, 96.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.11	147.66	(RUNOFF)
19.92	2.03	(RUNOFF)
23.87	1.03	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.76 WATERSHED INCHES, 131.42 CFS-HRS, 10.86 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	655.32	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.43 WATERSHED INCHES, 1299.14 CFS-HRS, 107.36 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 9 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	631.80	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.43 WATERSHED INCHES, 1298.17 CFS-HRS, 107.28 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	152.62	(RUNOFF)
9.93	4.49	(RUNOFF)
19.93	2.37	(RUNOFF)
23.87	1.21	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.47 WATERSHED INCHES, 139.20 CFS-HRS, 11.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	722.00	(NULL)

FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

TIME(HRS)											
4.98	DISCHG	.00	.00	.00	.01	.04	.11	.25	.62	3.91	20.70
5.81	DISCHG	66.48	159.39	297.10	453.98	594.73	687.80	721.97	684.07	606.40	521.18
6.64	DISCHG	449.21	394.89	355.26	324.27	298.67	276.61	257.20	239.77	223.96	209.36
7.47	DISCHG	196.21	184.82	175.23	167.33	160.83	155.47	151.01	147.19	143.53	139.60
8.30	DISCHG	135.20	130.05	124.67	119.59	115.14	111.36	108.15	105.37	102.90	100.68
9.13	DISCHG	98.66	96.81	95.12	93.58	92.16	90.86	89.65	88.52	87.47	86.48
9.96	DISCHG	85.54	84.64	83.69	82.60	81.35	79.87	78.26	76.68	75.21	73.90
10.79	DISCHG	72.74	71.70	70.76	69.87	69.02	68.20	67.39	66.53	65.59	64.54
11.62	DISCHG	63.36	62.07	60.72	59.34	57.95	56.55	55.15	53.80	52.51	51.29
12.45	DISCHG	50.15	49.08	48.05	47.09	46.21	45.41	44.68	44.00	43.32	42.62
13.28	DISCHG	41.89	41.12	40.33	39.57	38.87	38.24	37.70	37.24	36.84	36.47
14.11	DISCHG	36.09	35.70	35.29	34.87	34.44	34.04	33.68	33.35	33.07	32.81
14.94	DISCHG	32.57	32.35	32.12	31.83	31.48	31.03	30.52	30.01	29.54	29.14
15.77	DISCHG	28.79	28.49	28.22	27.98	27.76	27.55	27.36	27.18	27.01	26.86
16.60	DISCHG	26.71	26.57	26.44	26.32	26.21	26.10	25.99	25.90	25.81	25.72
17.43	DISCHG	25.64	25.56	25.49	25.42	25.35	25.29	25.24	25.19	25.14	25.09
18.26	DISCHG	25.05	25.01	24.97	24.94	24.91	24.88	24.85	24.83	24.81	24.79
19.09	DISCHG	24.77	24.75	24.73	24.72	24.71	24.69	24.68	24.67	24.66	24.65
19.92	DISCHG	24.65	24.64	24.58	24.39	23.99	23.35	22.47	21.53	20.64	19.87
20.75	DISCHG	19.25	18.74	18.33	17.96	17.61	17.27	16.97	16.70	16.47	16.25
21.58	DISCHG	16.03	15.81	15.60	15.42	15.26	15.10	14.94	14.77	14.62	14.48
22.41	DISCHG	14.36	14.25	14.13	14.01	13.89	13.79	13.71	13.64	13.55	13.46

23.24	DISCHG	13.38	13.31	13.26	13.22	13.16	13.10	13.04	12.99	12.97	12.95
24.07	DISCHG	12.87	12.66	12.22	11.56	10.67	9.70	8.79	8.01	7.36	6.83

RUNOFF VOLUME ABOVE BASEFLOW = 1.44 WATERSHED INCHES, 1437.36 CFS-HRS, 118.78 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	241.48	(RUNOFF)
7.93	9.92	(RUNOFF)
9.92	5.01	(RUNOFF)
19.90	2.57	(RUNOFF)
23.80	1.32	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.00 WATERSHED INCHES, 179.11 CFS-HRS, 14.80 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 20

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	185.63	(NULL)
10.01	5.00	(NULL)
12.95	3.80	(NULL)
19.92	2.57	(NULL)
+	*	* FIRST POINT OF FLAT PEAK
23.94	1.30	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.99 WATERSHED INCHES, 178.94 CFS-HRS, 14.79 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	175.96	(RUNOFF)
7.93	7.35	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.00 WATERSHED INCHES, 132.62 CFS-HRS, 10.96 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	330.39	(NULL)
9.93	8.71	(NULL)
13.76	5.80	(NULL)
19.90	4.47	(NULL)
23.85	2.27	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.99 WATERSHED INCHES, 311.56 CFS-HRS, 25.75 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	238.20	(NULL)
13.01	6.60	(NULL)
20.00	4.47	(NULL)
23.99	2.25	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.99 WATERSHED INCHES, 311.36 CFS-HRS, 25.73 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	142.93	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.54 WATERSHED INCHES, 124.63 CFS-HRS, 10.30 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	168.85	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.54 WATERSHED INCHES, 132.78 CFS-HRS, 10.97 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	339.06	(NULL)
12.93	8.88	(NULL)
19.96	5.99	(NULL)
23.92	3.01	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 435.99 CFS-HRS, 36.03 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	345.97	(NULL)
13.10	11.28	(NULL)
20.13	7.60	(NULL)
24.10	3.82	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.21 WATERSHED INCHES, 568.06 CFS-HRS, 46.94 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.94	295.20	(RUNOFF)
6.43	24.93	(RUNOFF)
6.93	14.96	(RUNOFF)
7.93	10.05	(RUNOFF)
9.92	4.99	(RUNOFF)
19.89	2.50	(RUNOFF)
23.71	1.30	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.54 WATERSHED INCHES, 204.98 CFS-HRS, 16.94 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.98	370.29	(NULL)
6.47	370.46	(NULL)
12.69	15.06	(NULL)
19.90	10.10	(NULL)
23.95	5.08	(NULL)

FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

TIME(HRS)											
4.15	DISCHG	.00	.00	.00	.09	.24	.40	.56	.74	.94	1.17
4.98	DISCHG	1.40	2.29	3.61	4.38	6.35	9.26	11.12	68.66	191.31	246.53
5.81	DISCHG	282.16	321.17	370.18	329.93	244.37	284.90	332.75	361.92	370.45	360.85
6.64	DISCHG	339.83	317.93	293.52	267.60	241.52	214.86	188.71	167.22	148.30	131.48
7.47	DISCHG	116.63	103.70	92.59	83.14	75.18	68.52	62.99	57.07	50.30	46.76
8.30	DISCHG	43.99	41.39	38.82	36.37	34.08	31.99	30.12	28.46	27.02	25.78
9.13	DISCHG	24.72	23.83	23.08	22.46	21.95	21.54	21.20	20.93	20.71	20.54
9.96	DISCHG	20.40	20.06	19.17	18.96	18.82	18.57	18.30	18.01	17.74	17.41
10.79	DISCHG	17.07	16.70	16.41	16.19	16.05	15.87	15.70	15.50	15.38	15.31
11.62	DISCHG	15.31	15.26	15.19	15.09	15.05	15.04	15.09	15.09	15.06	14.98
12.45	DISCHG	14.97	14.98	15.05	15.06	15.04	14.97	14.96	14.93	14.64	14.57
13.28	DISCHG	14.53	14.41	14.31	14.21	14.16	14.04	13.90	13.71	13.59	13.49
14.11	DISCHG	13.26	13.15	13.06	12.98	12.89	12.79	12.70	12.61	12.53	12.45

14.94	DISCHG	12.39	12.31	11.89	11.76	11.70	11.62	11.51	11.37	11.23	11.09
15.77	DISCHG	10.95	10.82	10.70	10.60	10.51	10.43	10.36	10.31	10.26	10.22
16.60	DISCHG	10.19	10.17	10.15	10.13	10.12	10.11	10.10	10.09	10.09	10.08
17.43	DISCHG	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08	10.08
18.26	DISCHG	10.08	10.08	10.08	10.08	10.08	10.08	10.09	10.09	10.09	10.09
19.09	DISCHG	10.09	10.09	10.09	10.09	10.09	10.09	10.10	10.10	10.10	10.10
19.92	DISCHG	10.10	10.10	9.33	8.96	8.89	8.72	8.50	8.23	7.98	7.69
20.75	DISCHG	7.36	6.98	6.67	6.41	6.24	6.07	5.90	5.69	5.54	5.44
21.58	DISCHG	5.42	5.38	5.32	5.22	5.15	5.12	5.16	5.17	5.16	5.09
22.41	DISCHG	5.04	5.03	5.09	5.12	5.12	5.06	5.02	5.01	5.07	5.11
23.24	DISCHG	5.11	5.05	5.01	5.01	5.07	5.11	5.11	5.05	5.01	5.01
24.07	DISCHG	4.43	3.90	3.80	3.70	3.52	3.25	2.94	2.61	2.28	1.97

RUNOFF VOLUME ABOVE BASEFLOW = 2.29 WATERSHED INCHES, 773.04 CFS-HRS, 63.88 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	1062.12	(NULL)

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		2.07 SQ.MI.
4.15	DISCHG	.00	.00	.00	.09	.24	.40	.56	.74	.94	1.17
4.98	DISCHG	1.40	2.29	3.61	4.39	6.39	9.37	11.37	69.28	195.22	267.23
5.81	DISCHG	348.63	480.57	667.28	783.91	839.10	972.70	1054.72	1045.99	976.85	882.03
6.64	DISCHG	789.04	712.83	648.79	591.87	540.19	491.47	445.91	406.99	372.26	340.85
7.47	DISCHG	312.84	288.52	267.82	250.47	236.01	223.99	214.00	204.26	193.83	186.36

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TR20 XEQ STRATTON BASIN EX. FACILITIES/FULL DEV. - 10 & 100 YEAR FLOWS JOB 1 PASS 2
REV 09/01/83 24-HR/AMC II STORM #1: 100 YR. STORM #2: 10 YEAR PAGE 50

8.30	DISCHG	179.19	171.44	163.49	155.96	149.22	143.35	138.27	133.83	129.92	126.46
9.13	DISCHG	123.38	120.64	118.20	116.04	114.12	112.40	110.85	109.45	108.18	107.02
9.96	DISCHG	105.94	104.69	102.86	101.56	100.16	98.44	96.56	94.69	92.95	91.31
10.79	DISCHG	89.80	88.40	87.18	86.06	85.07	84.08	83.08	82.03	80.97	79.85
11.62	DISCHG	78.67	77.33	75.92	74.43	72.99	71.58	70.25	68.89	67.57	66.28
12.45	DISCHG	65.12	64.05	63.10	62.15	61.25	60.38	59.64	58.92	57.96	57.19
13.28	DISCHG	56.43	55.53	54.64	53.78	53.02	52.28	51.61	50.96	50.43	49.96
14.11	DISCHG	49.35	48.85	48.36	47.84	47.33	46.83	46.37	45.96	45.59	45.26
14.94	DISCHG	44.96	44.66	44.01	43.59	43.17	42.65	42.02	41.38	40.77	40.22
15.77	DISCHG	39.74	39.31	38.93	38.58	38.27	37.98	37.72	37.49	37.27	37.08
16.60	DISCHG	36.90	36.74	36.59	36.45	36.32	36.20	36.09	35.99	35.89	35.80
17.43	DISCHG	35.72	35.64	35.56	35.50	35.43	35.37	35.32	35.27	35.22	35.17
18.26	DISCHG	35.13	35.09	35.06	35.02	34.99	34.96	34.94	34.92	34.89	34.88
19.09	DISCHG	34.86	34.84	34.83	34.81	34.80	34.79	34.78	34.77	34.76	34.75
19.92	DISCHG	34.75	34.73	33.91	33.34	32.87	32.07	30.97	29.76	28.62	27.56
20.75	DISCHG	26.60	25.73	24.99	24.36	23.85	23.35	22.87	22.39	22.00	21.68
21.58	DISCHG	21.44	21.19	20.92	20.63	20.40	20.22	20.10	19.95	19.77	19.57
22.41	DISCHG	19.40	19.29	19.22	19.13	19.00	18.85	18.73	18.65	18.62	18.57
23.24	DISCHG	18.49	18.36	18.28	18.23	18.23	18.21	18.14	18.05	17.98	17.96
24.07	DISCHG	17.31	16.55	16.03	15.27	14.19	12.95	11.73	10.62	9.65	8.80

RUNOFF VOLUME ABOVE BASEFLOW = 1.65 WATERSHED INCHES, 2210.40 CFS-HRS, 182.67 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	324.65	(RUNOFF)
9.93	8.30	(RUNOFF)
13.82	5.50	(RUNOFF)
19.88	4.24	(RUNOFF)
23.90	2.14	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 306.91 CFS-HRS, 25.36 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	231.31	(RUNOFF)
9.93	7.00	(RUNOFF)
12.94	5.32	(RUNOFF)
19.89	3.60	(RUNOFF)
23.92	1.82	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.92 WATERSHED INCHES, 245.80 CFS-HRS, 20.31 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF   CROSS SECTION  42
1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	231.32	(RUNOFF)
9.92	5.34	(RUNOFF)
12.91	4.03	(RUNOFF)
19.89	2.69	(RUNOFF)
23.91	1.36	(RUNOFF)

```
  RUNOFF VOLUME ABOVE BASEFLOW =  2.52 WATERSHED INCHES,    219.70 CFS-HRS,     18.16 ACRE-FEET;   BASEFLOW =     .00 CFS

OPERATION RUNOFF   CROSS SECTION  43
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.02	69.60	(RUNOFF)
7.93	2.79	(RUNOFF)

```
  RUNOFF VOLUME ABOVE BASEFLOW =  2.00 WATERSHED INCHES,     50.22 CFS-HRS,      4.15 ACRE-FEET;   BASEFLOW =     .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP                                                                          RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   2


EXECUTIVE CONTROL OPERATION COMPUT                                                                          RECORD ID
+                                   FROM XSECTION  44
+                                                  TO XSECTION  43
        STARTING TIME =    .00    RAIN DEPTH =  3.05    RAIN DURATION=  1.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 3
        ALTERNATE NO.= 2          STORM NO.= 1    MAIN TIME INCREMENT =    .08 HOURS


OPERATION RUNOFF   CROSS SECTION  44
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.82	153.57	(RUNOFF)

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  RUNOFF VOLUME ABOVE BASEFLOW =  1.84 WATERSHED INCHES,    123.22 CFS-HRS,     10.18 ACRE-FEET;   BASEFLOW =     .00 CFS

OPERATION REACH    STRUCTURE  1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.15	103.27	64.56

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  RUNOFF VOLUME ABOVE BASEFLOW =  1.84 WATERSHED INCHES,    123.25 CFS-HRS,     10.19 ACRE-FEET;   BASEFLOW =     .00 CFS

OPERATION RUNOFF   CROSS SECTION  45
1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	141.86	(RUNOFF)

```
  RUNOFF VOLUME ABOVE BASEFLOW =  1.84 WATERSHED INCHES,     98.53 CFS-HRS,      8.14 ACRE-FEET;   BASEFLOW =     .00 CFS

OPERATION ADDHYD   CROSS SECTION  45
```

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.86	188.63	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 221.78 CFS-HRS, 18.33 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	274.75	(RUNOFF)
1.95	29.59	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 160.18 CFS-HRS, 13.24 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	429.92	64.94

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 381.97 CFS-HRS, 31.57 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	359.57	64.87

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .32 SQ.MI.

.00	DISCHG	.00	.00	.00	.00	.11	1.96	12.06	28.07	31.34	34.89
.00	ELEV	57.70	57.70	57.70	57.70	57.72	58.01	59.61	62.27	63.09	63.97
.83	DISCHG	194.69	351.27	309.50	286.44	267.87	242.25	210.37	180.42	154.73	135.90
.83	ELEV	64.72	64.87	64.83	64.81	64.79	64.76	64.73	64.71	64.66	64.62
1.66	DISCHG	122.40	111.97	103.61	96.77	91.22	84.42	73.46	70.08	64.88	59.00
1.66	ELEV	64.60	64.58	64.56	64.55	64.53	64.52	64.49	64.45	64.38	64.31
2.49	DISCHG	53.01	47.21	41.72	36.64	34.84	34.59	34.33	34.06	33.78	33.49
2.49	ELEV	64.23	64.16	64.09	64.02	63.96	63.90	63.83	63.76	63.69	63.62
3.32	DISCHG	33.20	32.91	32.62	32.33	32.04	31.75	31.46	31.17	30.89	30.60
3.32	ELEV	63.55	63.48	63.41	63.33	63.26	63.19	63.12	63.04	62.97	62.90
4.15	DISCHG	30.32	30.04	29.77	29.49	29.22	28.95	28.68	28.42	28.15	27.89

1

4.15	ELEV	62.83	62.76	62.69	62.62	62.55	62.49	62.42	62.35	62.29	62.22
4.98	DISCHG	27.63	27.38	27.13	25.19	21.83	18.92	16.39	14.24	12.58	11.10
4.98	ELEV	62.16	62.09	62.03	61.71	61.17	60.71	60.30	59.96	59.69	59.46
5.81	DISCHG	9.80	8.66	7.64	6.75	5.96	5.26	4.65	4.10	3.62	3.20
5.81	ELEV	59.26	59.07	58.91	58.77	58.65	58.53	58.44	58.35	58.27	58.21
6.64	DISCHG	2.82	2.49	2.20	1.94	1.72	1.52	1.34	1.18	1.04	.92
6.64	ELEV	58.15	58.10	58.05	58.01	57.97	57.94	57.91	57.89	57.87	57.85
7.47	DISCHG	.81	.72	.63	.56	.49	.44	.39	.34	.30	.27
7.47	ELEV	57.83	57.81	57.80	57.79	57.78	57.77	57.76	57.75	57.75	57.74
8.30	DISCHG	.23	.21	.18	.16	.14	.13	.11	.10	.09	.08
8.30	ELEV	57.74	57.73	57.73	57.73	57.72	57.72	57.72	57.72	57.71	57.71
9.13	DISCHG	.07	.06	.05	.05	.04	.04	.03	.03	.02	.02
9.13	ELEV	57.71	57.71	57.71	57.71	57.71	57.71	57.71	57.70	57.70	57.70
9.96	DISCHG	.02	.02	.02	.01	.01	.01	.01	.01		
9.96	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70		

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 382.26 CFS-HRS, 31.59 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.70	132.93	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.09 WATERSHED INCHES, 85.17 CFS-HRS, 7.04 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.30	238.37	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.84 WATERSHED INCHES, 381.64 CFS-HRS, 31.54 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.09	76.05	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.09 WATERSHED INCHES, 85.14 CFS-HRS, 7.04 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.78	191.67	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.92 WATERSHED INCHES, 143.85 CFS-HRS, 11.89 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RUNOFF CROSS SECTION 2

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(230.66) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 5 %.
+ XSECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	230.66	(RUNOFF)
1.95	21.38	(RUNOFF)

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.09 SQ.MI.
.00	DISCHG	.00	.00	.00	.03	3.91	32.81	117.92	218.67	217.03	165.38
.83	DISCHG	124.86	98.03	80.51	72.55	64.29	48.80	37.48	28.21	23.41	21.79
1.66	DISCHG	21.24	21.07	21.01	20.97	21.02	18.01	8.81	3.13	1.13	.39
2.49	DISCHG	.13	.03	.00							

RUNOFF VOLUME ABOVE BASEFLOW = 2.07 WATERSHED INCHES, 124.08 CFS-HRS, 10.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.19	327.12	92.79

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.44 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.80	7.70	36.92	97.33	165.78	205.66
.00	ELEV	79.00	79.00	79.00	79.00	79.03	79.28	80.32	82.49	84.82	86.09
.83	DISCHG	206.21	234.03	290.37	316.03	326.27	324.90	312.02	290.04	263.65	237.65
.83	ELEV	86.12	87.57	90.66	92.15	92.74	92.66	91.91	90.64	89.16	87.76
1.66	DISCHG	213.95	193.86	176.92	162.75	150.79	139.98	127.63	112.68	99.43	88.25
1.66	ELEV	86.53	85.69	85.16	84.72	84.35	84.02	83.58	83.04	82.57	82.16
2.49	DISCHG	79.13	71.18	64.01	57.43	51.33	46.52	43.03	40.50	38.62	37.21
2.49	ELEV	81.84	81.55	81.30	81.06	80.84	80.67	80.54	80.45	80.38	80.33
3.32	DISCHG	36.13	35.29	34.60	34.03	33.54	33.11	32.72	32.35	32.01	31.69
3.32	ELEV	80.30	80.27	80.24	80.22	80.20	80.19	80.17	80.16	80.15	80.14
4.15	DISCHG	31.37	31.07	30.77	30.48	30.20	29.91	29.64	29.36	29.09	28.82
4.15	ELEV	80.13	80.11	80.10	80.09	80.08	80.07	80.06	80.05	80.04	80.03
4.98	DISCHG	28.55	28.29	28.02	27.76	27.02	25.52	23.62	21.53	19.43	17.45
4.98	ELEV	80.02	80.01	80.01	80.00	79.97	79.92	79.85	79.77	79.70	79.63
5.81	DISCHG	15.62	13.94	12.42	11.04	9.80	8.69	7.70	6.82	6.04	5.34
5.81	ELEV	79.56	79.50	79.45	79.40	79.35	79.31	79.28	79.24	79.22	79.19
6.64	DISCHG	4.72	4.17	3.69	3.26	2.88	2.54	2.25	1.98	1.75	1.55
6.64	ELEV	79.17	79.15	79.13	79.12	79.10	79.09	79.08	79.07	79.06	79.06
7.47	DISCHG	1.37	1.21	1.07	.94	.83	.73	.65	.57	.50	.44
7.47	ELEV	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02	79.02	79.02
8.30	DISCHG	.39	.35	.31	.27	.24	.21	.19	.16	.14	.13
8.30	ELEV	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.00
9.13	DISCHG	.11	.10	.09	.08	.07	.06	.05	.05	.04	.04

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9.13	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.03	.03	.02	.02	.02	.02	.01	.01	.01	.01

9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.00									
10.79	ELEV	79.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.86 WATERSHED INCHES, 525.49 CFS-HRS, 43.43 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.48	269.88	89.50

TIME(HRS)		FIRST HYDROGRAPH POINT =	.00 HOURS		TIME INCREMENT =	.08 HOURS		DRAINAGE AREA =		.44 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.63	6.27	31.21	87.04	146.62	172.65
.00	ELEV	79.00	79.00	79.00	79.00	79.02	79.22	80.12	82.12	84.22	85.03
.83	DISCHG	194.81	206.42	218.63	237.13	249.17	257.88	264.78	268.91	269.82	267.63
.83	ELEV	85.72	86.13	86.77	87.73	88.38	88.85	89.22	89.45	89.50	89.38
1.66	DISCHG	262.86	256.14	248.08	236.31	218.91	200.69	156.17	122.55	96.91	92.14
1.66	ELEV	89.12	88.76	88.32	87.69	86.78	85.90	84.52	83.39	82.48	82.30
2.49	DISCHG	79.00	73.02	64.58	58.57	52.05	47.19	43.44	40.84	38.85	37.39
2.49	ELEV	81.83	81.62	81.32	81.10	80.87	80.69	80.56	80.46	80.39	80.34
3.32	DISCHG	36.27	35.40	34.69	34.11	33.61	33.17	32.77	32.40	32.06	31.73
3.32	ELEV	80.30	80.27	80.24	80.22	80.21	80.19	80.18	80.16	80.15	80.14
4.15	DISCHG	31.42	31.11	30.82	30.52	30.24	29.95	29.67	29.40	29.13	28.86
4.15	ELEV	80.13	80.12	80.11	80.09	80.08	80.07	80.06	80.05	80.04	80.03
4.98	DISCHG	28.59	28.32	28.06	27.80	27.17	25.78	23.90	21.84	19.73	17.73
4.98	ELEV	80.03	80.02	80.01	80.00	79.97	79.92	79.86	79.78	79.71	79.64
5.81	DISCHG	15.88	14.18	12.63	11.23	9.97	8.85	7.84	6.94	6.14	5.44
5.81	ELEV	79.57	79.51	79.45	79.40	79.36	79.32	79.28	79.25	79.22	79.19
6.64	DISCHG	4.81	4.25	3.76	3.32	2.93	2.59	2.29	2.02	1.78	1.58
6.64	ELEV	79.17	79.15	79.13	79.12	79.11	79.09	79.08	79.07	79.06	79.06
7.47	DISCHG	1.39	1.23	1.08	.96	.84	.75	.66	.58	.51	.45
7.47	ELEV	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02	79.02	79.02
8.30	DISCHG	.40	.35	.31	.27	.24	.21	.19	.17	.15	.13
8.30	ELEV	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.00
9.13	DISCHG	.11	.10	.09	.08	.07	.06	.05	.05	.04	.04
9.13	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.03	.03	.02	.02	.02	.02	.01	.01	.01	.01
9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.00									
10.79	ELEV	79.00									

RUNOFF VOLUME ABOVE BASEFLOW = 1.86 WATERSHED INCHES, 525.92 CFS-HRS, 43.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.64	230.44	(NULL)

TIME(HRS)		FIRST HYDROGRAPH POINT =	.00 HOURS		TIME INCREMENT =	.08 HOURS		DRAINAGE AREA =		.16 SQ.MI.
.00	DISCHG	.00	.00	.00	.03	3.91	32.82	118.22	221.28	228.22	194.34
.83	DISCHG	174.85	163.85	154.39	148.59	138.77	119.88	104.41	90.08	79.42	71.56
1.66	DISCHG	64.93	59.29	54.56	50.67	47.59	42.06	30.84	23.39	19.27	15.97
2.49	DISCHG	13.07	10.59	8.52	6.82	5.44	4.32	3.43	2.72	2.15	1.70
3.32	DISCHG	1.35	1.07	.85	.67	.53	.42	.33	.26	.21	.16
4.15	DISCHG	.13	.10	.08	.06	.05	.04	.03	.02	.02	.01
4.98	DISCHG	.01	.01	.01	.00						

RUNOFF VOLUME ABOVE BASEFLOW = 2.08 WATERSHED INCHES, 209.22 CFS-HRS, 17.29 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.61	268.56	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.86 WATERSHED INCHES, 525.34 CFS-HRS, 43.41 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)

1.17	.	366.54	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.92 WATERSHED INCHES, 734.56 CFS-HRS, 60.70 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.55	284.34	(RUNOFF)
1.95	24.19	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.05 WATERSHED INCHES, 132.23 CFS-HRS, 10.93 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	526.56	44.15
1.07	433.51	44.01

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.00	.06	18.69	121.91	383.22	520.56	476.49	439.44

1

.00	ELEV	34.00	34.00	34.00	34.00	35.30	38.32	43.57	44.14	44.07	44.02
.83	DISCHG	428.34	425.09	425.58	433.28	419.22	400.59	385.48	373.47	367.73	362.47
.83	ELEV	43.99	43.96	43.97	44.01	43.91	43.73	43.59	43.48	43.43	43.38
1.66	DISCHG	355.40	346.56	336.27	325.31	312.22	279.55	242.32	199.01	160.74	128.82
1.66	ELEV	43.31	43.23	43.13	43.03	42.91	42.61	41.25	39.91	39.12	38.46
2.49	DISCHG	112.61	96.93	86.30	76.12	67.85	60.08	53.68	48.59	44.79	41.91
2.49	ELEV	38.13	37.74	37.44	37.15	36.92	36.70	36.52	36.38	36.27	36.19
3.32	DISCHG	39.75	38.10	36.83	35.82	35.01	34.34	33.77	33.27	32.83	32.42
3.32	ELEV	36.13	36.09	36.05	36.02	36.00	35.97	35.94	35.92	35.90	35.89
4.15	DISCHG	32.05	31.70	31.37	31.05	30.74	30.43	30.14	29.85	29.57	29.29
4.15	ELEV	35.87	35.86	35.84	35.83	35.82	35.80	35.79	35.78	35.77	35.75
4.98	DISCHG	29.02	28.74	28.48	28.21	27.95	27.44	26.37	24.78	22.89	20.86
4.98	ELEV	35.74	35.73	35.72	35.71	35.70	35.68	35.63	35.56	35.48	35.40
5.81	DISCHG	18.85	16.94	15.16	13.54	12.06	10.72	9.52	8.44	7.48	6.62
5.81	ELEV	35.31	35.23	35.15	35.08	35.02	34.93	34.82	34.73	34.65	34.57
6.64	DISCHG	5.86	5.18	4.58	4.05	3.58	3.16	2.79	2.47	2.18	1.92
6.64	ELEV	34.51	34.45	34.40	34.35	34.31	34.27	34.24	34.21	34.19	34.17
7.47	DISCHG	1.70	1.50	1.33	1.17	1.03	.91	.81	.71	.63	.55
7.47	ELEV	34.15	34.13	34.11	34.10	34.09	34.08	34.07	34.06	34.05	34.05
8.30	DISCHG	.49	.43	.38	.34	.30	.26	.23	.20	.18	.16
8.30	ELEV	34.04	34.04	34.03	34.03	34.03	34.02	34.02	34.02	34.02	34.01
9.13	DISCHG	.14	.12	.11	.09	.08	.07	.06	.06	.05	.04
9.13	ELEV	34.01	34.01	34.01	34.01	34.01	34.01	34.01	34.00	34.00	34.00
9.96	DISCHG	.04	.03	.03	.03	.02	.02	.02	.01	.01	.01
9.96	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00
10.79	DISCHG	.01	.00								
10.79	ELEV	34.00	34.00								

RUNOFF VOLUME ABOVE BASEFLOW = 1.94 WATERSHED INCHES, 866.80 CFS-HRS, 71.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	526.56	(NULL)
1.07	433.51	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.00	.06	18.69	121.91	383.22	520.56	476.49	439.44
.83	DISCHG	428.34	425.09	425.58	433.28	419.22	400.59	385.48	373.47	367.73	362.47
1.66	DISCHG	355.40	346.56	336.27	325.31	312.22	279.55	242.32	199.01	160.74	128.82
2.49	DISCHG	112.61	96.93	86.30	76.12	67.85	60.08	53.68	48.59	44.79	41.91
3.32	DISCHG	39.75	38.10	36.83	35.82	35.01	34.34	33.77	33.27	32.83	32.42
4.15	DISCHG	32.05	31.70	31.37	31.05	30.74	30.43	30.14	29.85	29.57	29.29
4.98	DISCHG	29.02	28.74	28.48	28.21	27.95	27.44	26.37	24.78	22.89	20.86
5.81	DISCHG	18.85	16.94	15.16	13.54	12.06	10.72	9.52	8.44	7.48	6.62
6.64	DISCHG	5.86	5.18	4.58	4.05	3.58	3.16	2.79	2.47	2.18	1.92
7.47	DISCHG	1.70	1.50	1.33	1.17	1.03	.91	.81	.71	.63	.55
8.30	DISCHG	.49	.43	.38	.34	.30	.26	.23	.20	.18	.16

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9.13	DISCHG	.14	.12	.11	.09	.08	.07	.06	.06	.05	.04
9.96	DISCHG	.04	.03	.03	.03	.02	.02	.02	.01	.01	.01
10.79	DISCHG	.01	.00								

RUNOFF VOLUME ABOVE BASEFLOW = 1.94 WATERSHED INCHES, 866.80 CFS-HRS, 71.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.18	425.52	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.94 WATERSHED INCHES, 867.39 CFS-HRS, 71.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	179.52	(RUNOFF)
1.95	15.90	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 95.43 CFS-HRS, 7.89 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	204.57	(RUNOFF)
1.95	15.04	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.69 WATERSHED INCHES, 105.84 CFS-HRS, 8.75 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	504.08	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .76 SQ.MI.

.00	DISCHG	.00	.00	.00	.09	4.59	37.07	148.48	352.81	480.70	503.11
.83	DISCHG	495.87	485.71	477.45	474.67	473.44	459.42	442.22	424.07	408.95	398.47
1.66	DISCHG	390.34	382.75	374.70	365.78	356.12	342.85	316.55	285.94	251.46	215.87
2.49	DISCHG	181.84	154.81	132.23	114.32	99.42	87.11	76.57	67.64	60.22	54.20
3.32	DISCHG	49.41	45.64	42.70	40.41	38.62	37.21	36.09	35.18	34.44	33.81
4.15	DISCHG	33.27	32.79	32.37	31.98	31.61	31.27	30.94	30.63	30.33	30.03
4.98	DISCHG	29.74	29.46	29.18	28.91	28.63	28.36	28.00	27.37	26.36	25.01
5.81	DISCHG	23.39	21.62	19.79	17.99	16.25	14.61	13.10	11.70	10.43	9.28
6.64	DISCHG	8.24	7.31	6.48	5.74	5.08	4.49	3.97	3.51	3.11	2.74
7.47	DISCHG	2.42	2.14	1.89	1.67	1.48	1.30	1.15	1.01	.89	.79

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8.30	DISCHG	.70	.62	.54	.48	.42	.37	.33	.29	.26	.22
9.13	DISCHG	.20	.17	.15	.14	.12	.10	.09	.08	.07	.06
9.96	DISCHG	.05	.05	.04	.04	.03	.03	.02	.02	.02	.02
10.79	DISCHG	.01	.01	.01	.00						

RUNOFF VOLUME ABOVE BASEFLOW = 1.96 WATERSHED INCHES, 962.81 CFS-HRS, 79.57 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	667.88	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 1068.65 CFS-HRS, 88.31 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.87	601.05	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 1068.06 CFS-HRS, 88.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	223.41	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 139.81 CFS-HRS, 11.55 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	315.14	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 231.55 CFS-HRS, 19.14 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	519.85	74.00

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 371.36 CFS-HRS, 30.69 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.46	116.32	71.18

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

.00	ELEV	70.00	70.00	70.00	70.00	70.00	70.01	70.05	70.16	70.34	70.55
.83	ELEV	70.75	70.91	71.02	71.08	71.12	71.15	71.17	71.18	71.18	71.17
1.66	ELEV	71.17	71.15	71.14	71.13	71.12	71.11	71.09	71.07	71.05	71.03
2.49	ELEV	71.01	70.97	70.94	70.90	70.86	70.83	70.79	70.76	70.73	70.70
3.32	ELEV	70.67	70.64	70.62	70.59	70.57	70.54	70.52	70.50	70.48	70.46
4.15	ELEV	70.44	70.42	70.40	70.39	70.37	70.36	70.34	70.33	70.31	70.30
4.98	ELEV	70.29	70.28	70.27	70.25	70.24	70.23	70.22	70.21	70.21	70.20
5.81	ELEV	70.19	70.18	70.17	70.17	70.16	70.15	70.15	70.14	70.14	70.13
6.64	ELEV	70.12	70.12	70.11	70.11	70.11	70.10	70.10	70.09	70.09	70.09
7.47	ELEV	70.08	70.08	70.08	70.07	70.07	70.07	70.06	70.06	70.06	70.06
8.30	ELEV	70.05	70.05	70.05	70.05	70.05	70.04	70.04	70.04	70.04	70.04
9.13	ELEV	70.04	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.03	70.02
9.96	ELEV	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02
10.79	ELEV	70.02	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
11.62	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
12.45	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.00	70.00	70.00
13.28	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.11	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00

14.94	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
15.77	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
16.60	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
17.43	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00

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18.26	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
19.09	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
19.92	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 371.19 CFS-HRS, 30.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	111.30	(RUNOFF)
1.95	8.32	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 52.68 CFS-HRS, 4.35 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	128.05	(NULL)
1.15	130.76	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.15 WATERSHED INCHES, 423.87 CFS-HRS, 35.03 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.68	122.81	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.15 WATERSHED INCHES, 423.74 CFS-HRS, 35.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.75	361.95	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.52 WATERSHED INCHES, 258.43 CFS-HRS, 21.36 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	433.86	(NULL)

1

RUNOFF VOLUME ABOVE BASEFLOW = 2.28 WATERSHED INCHES, 682.17 CFS-HRS, 56.37 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.82	1009.48	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.11 WATERSHED INCHES, 1750.23 CFS-HRS, 144.64 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	1003.93	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.11 WATERSHED INCHES, 1750.37 CFS-HRS, 144.65 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.76	249.80	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 179.55 CFS-HRS, 14.84 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.89	1206.00	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.13 WATERSHED INCHES, 1929.92 CFS-HRS, 159.49 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 9 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	1182.59	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.13 WATERSHED INCHES, 1929.69 CFS-HRS, 159.47 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	281.66	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.17 WATERSHED INCHES, 206.02 CFS-HRS, 17.03 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.98	1376.99	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

.00	DISCHG	.00	.00	.00	.14	3.12	22.12	92.71	253.03	506.39	828.23
.83	DISCHG	1150.56	1346.38	1374.95	1306.67	1209.63	1115.99	1035.83	965.53	894.71	827.35
1.66	DISCHG	766.96	718.67	683.14	658.28	640.35	625.25	607.83	585.19	554.92	513.55
2.49	DISCHG	467.24	420.58	375.72	333.37	295.65	262.99	235.36	212.06	192.33	175.42
3.32	DISCHG	160.80	148.13	137.20	127.81	119.76	112.88	106.96	101.84	97.37	93.41
4.15	DISCHG	89.88	86.68	83.75	81.05	78.53	76.17	73.94	71.82	69.81	67.89
4.98	DISCHG	66.05	64.29	62.60	60.97	59.41	57.90	56.45	55.05	53.71	52.37
5.81	DISCHG	50.94	49.31	47.42	45.27	42.92	40.45	37.94	35.45	33.04	30.74
6.64	DISCHG	28.56	26.53	24.64	22.89	21.28	19.80	18.44	17.20	16.05	15.00
7.47	DISCHG	14.04	13.15	12.34	11.59	10.89	10.26	9.66	9.12	8.61	8.14
8.30	DISCHG	7.70	7.29	6.91	6.55	6.22	5.91	5.62	5.34	5.09	4.84
9.13	DISCHG	4.61	4.40	4.19	4.00	3.81	3.64	3.48	3.32	3.17	3.03
9.96	DISCHG	2.90	2.77	2.65	2.53	2.42	2.32	2.22	2.13	2.03	1.95
10.79	DISCHG	1.86	1.78	1.71	1.64	1.57	1.50	1.43	1.37	1.31	1.26
11.62	DISCHG	1.21	1.16	1.11	1.06	1.02	.98	.94	.90	.86	.82
12.45	DISCHG	.79	.76	.73	.70	.67	.64	.61	.59	.56	.54
13.28	DISCHG	.52	.50	.48	.46	.44	.42	.40	.38	.37	.35
14.11	DISCHG	.34	.32	.31	.30	.29	.27	.26	.25	.24	.23
14.94	DISCHG	.22	.21	.20	.19	.19	.18	.17	.17	.16	.15
15.77	DISCHG	.14	.14	.13	.13	.12	.12	.11	.11	.10	.10
16.60	DISCHG	.09	.09	.09	.08	.08	.08	.07	.07	.07	.06

17.43	DISCHG	.06	.06	.06	.05	.05	.05	.05	.05	.04	.04
18.26	DISCHG	.04	.04	.04	.03	.03	.03	.03	.03	.03	.03
19.09	DISCHG	.03	.03	.02	.02	.02	.02	.02	.02	.02	.02
19.92	DISCHG	.02	.01	.01	.01	.01	.01	.01	.01	.01	.01
20.75	DISCHG	.01	.01	.01	.01	.00					

RUNOFF VOLUME ABOVE BASEFLOW = 2.14 WATERSHED INCHES, 2135.72 CFS-HRS, 176.50 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	389.00	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.52 WATERSHED INCHES, 225.78 CFS-HRS, 18.66 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION REACH STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.84	287.88	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.52 WATERSHED INCHES, 225.70 CFS-HRS, 18.65 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	282.51	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.52 WATERSHED INCHES, 167.35 CFS-HRS, 13.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.75	507.27	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.52 WATERSHED INCHES, 393.05 CFS-HRS, 32.48 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	381.81	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.52 WATERSHED INCHES, 392.95 CFS-HRS, 32.47 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	191.55	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.77 WATERSHED INCHES, 136.03 CFS-HRS, 11.24 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.67	234.24	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.77 WATERSHED INCHES, 144.83 CFS-HRS, 11.97 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	510.31	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.58 WATERSHED INCHES, 528.98 CFS-HRS, 43.71 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.18	528.10	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 2.62 WATERSHED INCHES, 673.72 CFS-HRS, 55.68 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.53	504.79	(RUNOFF)
1.95	32.53	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 2.75 WATERSHED INCHES, 222.20 CFS-HRS, 18.36 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.54	530.27	(NULL)
1.09	619.42	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

.00	DISCHG	.00	.00	3.69	40.34	118.91	262.43	518.69	519.82	432.91	444.90
.83	DISCHG	501.54	550.34	591.61	619.23	599.93	576.70	545.93	510.93	475.67	436.98
1.66	DISCHG	397.08	358.19	321.78	289.11	260.42	219.02	185.47	164.06	144.49	125.59
2.49	DISCHG	107.68	91.18	76.32	63.20	51.83	42.12	33.96	27.17	21.60	17.07
3.32	DISCHG	13.42	10.50	8.18	6.35	4.91	3.79	2.91	2.23	1.71	1.30
4.15	DISCHG	.99	.75	.57	.43	.32	.25	.18	.14	.10	.08
4.98	DISCHG	.05	.04	.03	.02	.01	.01	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = 2.65 WATERSHED INCHES, 895.93 CFS-HRS, 74.04 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	1967.53	(NULL)

1

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 2.07 SQ.MI.

.00	DISCHG	.00	.00	3.69	40.48	122.03	284.55	611.40	772.85	939.30	1273.13
.83	DISCHG	1652.10	1896.72	1966.57	1925.90	1809.56	1692.69	1581.75	1476.46	1370.38	1264.33
1.66	DISCHG	1164.04	1076.86	1004.92	947.39	900.77	844.27	793.30	749.26	699.41	639.14
2.49	DISCHG	574.92	511.76	452.03	396.57	347.48	305.11	269.32	239.23	213.93	192.49
3.32	DISCHG	174.22	158.63	145.38	134.15	124.67	116.66	109.87	104.07	99.07	94.71
4.15	DISCHG	90.87	87.43	84.32	81.48	78.86	76.42	74.12	71.96	69.91	67.96
4.98	DISCHG	66.11	64.33	62.63	60.99	59.42	57.91	56.46	55.06	53.71	52.37
5.81	DISCHG	50.94	49.31	47.42	45.27	42.92	40.45	37.94	35.45	33.04	30.74
6.64	DISCHG	28.56	26.53	24.64	22.89	21.28	19.80	18.44	17.20	16.05	15.00
7.47	DISCHG	14.04	13.15	12.34	11.59	10.89	10.26	9.66	9.12	8.61	8.14
8.30	DISCHG	7.70	7.29	6.91	6.55	6.22	5.91	5.62	5.34	5.09	4.84
9.13	DISCHG	4.61	4.40	4.19	4.00	3.81	3.64	3.48	3.32	3.17	3.03
9.96	DISCHG	2.90	2.77	2.65	2.53	2.42	2.32	2.22	2.13	2.03	1.95
10.79	DISCHG	1.86	1.78	1.71	1.64	1.57	1.50	1.43	1.37	1.31	1.26
11.62	DISCHG	1.21	1.16	1.11	1.06	1.02	.98	.94	.90	.86	.82
12.45	DISCHG	.79	.76	.73	.70	.67	.64	.61	.59	.56	.54
13.28	DISCHG	.52	.50	.48	.46	.44	.42	.40	.38	.37	.35
14.11	DISCHG	.34	.32	.31	.30	.29	.27	.26	.25	.24	.23
14.94	DISCHG	.22	.21	.20	.19	.19	.18	.17	.17	.16	.15
15.77	DISCHG	.14	.14	.13	.13	.12	.12	.11	.11	.10	.10
16.60	DISCHG	.09	.09	.09	.08	.08	.08	.07	.07	.07	.06
17.43	DISCHG	.06	.06	.06	.05	.05	.05	.05	.05	.04	.04
18.26	DISCHG	.04	.04	.04	.03	.03	.03	.03	.03	.03	.03
19.09	DISCHG	.03	.03	.02	.02	.02	.02	.02	.02	.02	.02

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 19.92    DISCHG          .02       .01       .01       .01       .01       .01       .01       .01       .01       .01
 20.75    DISCHG          .01       .01       .01       .01       .00

  RUNOFF VOLUME ABOVE BASEFLOW =  2.26 WATERSHED INCHES,   3031.64 CFS-HRS,   250.53 ACRE-FEET;   BASEFLOW =    .00 CFS


OPERATION RUNOFF   CROSS SECTION  40

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               .81                         470.03                       (RUNOFF)

  RUNOFF VOLUME ABOVE BASEFLOW =  2.58 WATERSHED INCHES,    372.65 CFS-HRS,    30.80 ACRE-FEET;   BASEFLOW =    .00 CFS


OPERATION RUNOFF   CROSS SECTION  41

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               .88                         360.05                       (RUNOFF)

  RUNOFF VOLUME ABOVE BASEFLOW =  2.49 WATERSHED INCHES,    317.55 CFS-HRS,    26.24 ACRE-FEET;   BASEFLOW =    .00 CFS


OPERATION RUNOFF   CROSS SECTION  42
1


TR20 XEQ                    STRATTON BASIN EX. FACILITIES/FULL DEV. - 10 & 100 YEAR FLOWS                JOB  1   PASS   3
     REV 09/01/83           24-HR/AMC II  STORM #1:  100 YR.  STORM #2:  10 YEAR                                PAGE  67


          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               .81                         297.40                       (RUNOFF)

  RUNOFF VOLUME ABOVE BASEFLOW =  2.76 WATERSHED INCHES,    240.72 CFS-HRS,    19.89 ACRE-FEET;   BASEFLOW =    .00 CFS


OPERATION RUNOFF   CROSS SECTION  43

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               .63                         113.30                       (RUNOFF)
              1.95                           9.46                       (RUNOFF)

  RUNOFF VOLUME ABOVE BASEFLOW =  2.52 WATERSHED INCHES,     63.43 CFS-HRS,     5.24 ACRE-FEET;   BASEFLOW =    .00 CFS


EXECUTIVE CONTROL OPERATION ENDCMP                                                                    RECORD ID
+                                   COMPUTATIONS COMPLETED FOR PASS   3


EXECUTIVE CONTROL OPERATION COMPUT                                                                    RECORD ID
+                                   FROM XSECTION  44
+                                                  TO XSECTION  43
       STARTING TIME =    .00    RAIN DEPTH =  2.06    RAIN DURATION=  1.00    RAIN TABLE NO.= 9    ANT. MOIST. COND= 3
       ALTERNATE NO.= 2          STORM NO.= 2    MAIN TIME INCREMENT =   .08 HOURS


OPERATION RUNOFF   CROSS SECTION  44

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               .74                          65.36                       (RUNOFF)

  RUNOFF VOLUME ABOVE BASEFLOW =   .99 WATERSHED INCHES,     66.73 CFS-HRS,     5.51 ACRE-FEET;   BASEFLOW =    .00 CFS


OPERATION REACH    STRUCTURE  1

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
              1.16                          40.05                       64.06

  RUNOFF VOLUME ABOVE BASEFLOW =   .99 WATERSHED INCHES,     66.71 CFS-HRS,     5.51 ACRE-FEET;   BASEFLOW =    .00 CFS


OPERATION RUNOFF   CROSS SECTION  45

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)           PEAK ELEVATION(FEET)
               .65                          61.82                       (RUNOFF)
```

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 53.29 CFS-HRS, 4.40 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION ADDHYD CROSS SECTION 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	75.39	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 120.00 CFS-HRS, 9.92 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	123.74	(RUNOFF)
1.23	44.22	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 86.59 CFS-HRS, 7.16 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	187.51	64.71

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 206.59 CFS-HRS, 17.07 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.84	79.08	64.51

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .08 HOURS			DRAINAGE AREA =		.32 SQ.MI.
.00	DISCHG	.00	.00	.00	.00	.26	3.32	14.11	27.49	28.89	30.09
.00	ELEV	57.70	57.70	57.70	57.70	57.74	58.23	59.94	62.12	62.47	62.77
.83	DISCHG	31.10	31.98	32.78	33.53	34.27	34.98	47.92	58.15	65.23	69.65
.83	ELEV	63.02	63.24	63.44	63.63	63.82	64.00	64.17	64.30	64.39	64.44
1.66	DISCHG	72.33	73.95	79.00	76.22	73.87	72.71	69.75	64.95	59.20	53.31
1.66	ELEV	64.48	64.50	64.51	64.50	64.50	64.48	64.45	64.38	64.31	64.23
2.49	DISCHG	47.63	42.31	37.41	34.89	34.66	34.41	34.15	33.89	33.62	33.34
2.49	ELEV	64.16	64.09	64.03	63.97	63.91	63.85	63.79	63.72	63.65	63.58
3.32	DISCHG	33.06	32.77	32.49	32.20	31.92	31.63	31.35	31.06	30.78	30.50
3.32	ELEV	63.51	63.44	63.37	63.30	63.23	63.16	63.09	63.02	62.95	62.88
4.15	DISCHG	30.22	29.95	29.67	29.40	29.13	28.86	28.59	28.33	28.07	27.81
4.15	ELEV	62.81	62.74	62.67	62.60	62.53	62.47	62.40	62.33	62.27	62.20
4.98	DISCHG	27.55	27.30	27.05	24.05	20.84	18.06	15.66	13.68	12.08	10.67
4.98	ELEV	62.14	62.07	62.01	61.53	61.01	60.57	60.19	59.87	59.62	59.39
5.81	DISCHG	9.42	8.32	7.34	6.48	5.73	5.06	4.46	3.94	3.48	3.07
5.81	ELEV	59.19	59.02	58.86	58.73	58.61	58.50	58.41	58.33	58.25	58.19

1

6.64	DISCHG	2.71	2.40	2.11	1.87	1.65	1.46	1.29	1.13	1.00	.88
6.64	ELEV	58.13	58.08	58.04	58.00	57.96	57.93	57.90	57.88	57.86	57.84
7.47	DISCHG	.78	.69	.61	.54	.47	.42	.37	.33	.29	.25
7.47	ELEV	57.82	57.81	57.80	57.79	57.78	57.77	57.76	57.75	57.75	57.74
8.30	DISCHG	.22	.20	.18	.15	.14	.12	.11	.09	.08	.07
8.30	ELEV	57.74	57.73	57.73	57.72	57.72	57.72	57.72	57.71	57.71	57.71
9.13	DISCHG	.06	.06	.05	.04	.04	.03	.03	.03	.02	.02
9.13	ELEV	57.71	57.71	57.71	57.71	57.71	57.71	57.70	57.70	57.70	57.70
9.96	DISCHG	.02	.02	.01	.01	.01	.01	.01	.01		
9.96	ELEV	57.70	57.70	57.70	57.70	57.70	57.70	57.70	57.70		

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 206.60 CFS-HRS, 17.07 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	64.70	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 48.67 CFS-HRS, 4.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.22	68.66	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = .99 WATERSHED INCHES, 206.70 CFS-HRS, 17.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.11	32.16	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.20 WATERSHED INCHES, 48.67 CFS-HRS, 4.02 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.70	84.70	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 79.32 CFS-HRS, 6.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 2
1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(113.65) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 6 %.
+ XSECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.54	113.65	(RUNOFF)
1.22	33.66	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .09 SQ.MI.

.00	DISCHG	.00	.00	.00	.09	7.06	48.81	106.73	105.86	75.48	54.30
.83	DISCHG	43.24	36.84	34.16	33.39	33.37	33.61	32.69	28.72	24.13	21.86
1.66	DISCHG	21.27	21.18	20.67	20.40	18.97	14.44	6.77	2.41	.86	.30
2.49	DISCHG	.09	.02	.00							

RUNOFF VOLUME ABOVE BASEFLOW = 1.17 WATERSHED INCHES, 70.27 CFS-HRS, 5.81 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.73	94.94	82.40
2.03	90.24	82.24

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

.00	DISCHG	.00	.00	.00	.02	1.53	11.73	38.41	71.83	91.81	94.64
.00	ELEV	79.00	79.00	79.00	79.00	79.05	79.42	80.38	81.58	82.29	82.39
.83	DISCHG	86.74	79.01	73.82	70.83	69.65	69.68	70.03	72.12	74.41	76.45
.83	ELEV	82.11	81.83	81.65	81.54	81.50	81.50	81.51	81.59	81.67	81.74
1.66	DISCHG	78.77	81.66	84.65	88.17	90.07	89.87	87.00	82.04	76.47	71.17
1.66	ELEV	81.82	81.93	82.04	82.16	82.23	82.22	82.12	81.94	81.74	81.55
2.49	DISCHG	66.48	61.95	57.49	53.09	49.16	46.06	43.58	41.58	39.95	38.61
2.49	ELEV	81.38	81.22	81.06	80.90	80.76	80.65	80.56	80.49	80.43	80.38
3.32	DISCHG	37.51	36.58	35.79	35.10	34.50	33.96	33.47	33.03	32.62	32.24
3.32	ELEV	80.35	80.31	80.28	80.26	80.24	80.22	80.20	80.18	80.17	80.16
4.15	DISCHG	31.88	31.53	31.20	30.88	30.57	30.27	29.98	29.69	29.41	29.13
4.15	ELEV	80.14	80.13	80.12	80.11	80.10	80.09	80.08	80.06	80.05	80.04
4.98	DISCHG	28.85	28.58	28.31	28.05	27.21	25.89	24.26	22.46	20.63	18.85
4.98	ELEV	80.03	80.02	80.02	80.01	79.98	79.93	79.87	79.81	79.74	79.68
5.81	DISCHG	17.15	15.54	14.03	12.64	11.35	10.18	9.11	8.14	7.27	6.48
5.81	ELEV	79.61	79.56	79.50	79.45	79.41	79.37	79.33	79.29	79.26	79.23

6.64	DISCHG	5.77	5.13	4.56	4.05	3.60	3.19	2.83	2.51	2.22	1.97
6.64	ELEV	79.21	79.18	79.16	79.15	79.13	79.11	79.10	79.09	79.08	79.07
7.47	DISCHG	1.74	1.54	1.36	1.21	1.07	.94	.83	.74	.65	.57
7.47	ELEV	79.06	79.06	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02
8.30	DISCHG	.51	.45	.40	.35	.31	.27	.24	.21	.19	.17
8.30	ELEV	79.02	79.02	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01
9.13	DISCHG	.15	.13	.11	.10	.09	.08	.07	.06	.05	.05
9.13	ELEV	79.01	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.04	.04	.03	.03	.02	.02	.02	.02	.01	.01

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9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.01	.01	.00							
10.79	ELEV	79.00	79.00	79.00							

RUNOFF VOLUME ABOVE BASEFLOW = 1.01 WATERSHED INCHES, 286.02 CFS-HRS, 23.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	95.04	82.41
2.03	90.27	82.24

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .44 SQ.MI.

.00	DISCHG	.00	.00	.00	.02	1.20	9.65	33.63	67.04	90.01	95.01
.00	ELEV	79.00	79.00	79.00	79.00	79.04	79.35	80.21	81.40	82.23	82.41
.83	DISCHG	88.29	79.86	74.50	71.12	69.76	69.61	69.99	71.68	74.15	76.14
.83	ELEV	82.17	81.86	81.67	81.55	81.50	81.50	81.51	81.57	81.66	81.73
1.66	DISCHG	78.42	81.20	84.24	87.62	89.95	89.98	87.58	82.82	77.27	71.91
1.66	ELEV	81.81	81.91	82.02	82.14	82.23	82.23	82.14	81.97	81.77	81.58
2.49	DISCHG	67.12	62.60	58.12	53.72	49.69	46.46	43.91	41.84	40.17	38.79
2.49	ELEV	81.41	81.24	81.08	80.93	80.78	80.67	80.57	80.50	80.44	80.39
3.32	DISCHG	37.66	36.71	35.90	35.20	34.58	34.03	33.54	33.09	32.68	32.29
3.32	ELEV	80.35	80.32	80.29	80.26	80.24	80.22	80.20	80.19	80.17	80.16
4.15	DISCHG	31.93	31.58	31.25	30.93	30.62	30.31	30.02	29.73	29.45	29.17
4.15	ELEV	80.14	80.13	80.12	80.11	80.10	80.09	80.08	80.07	80.06	80.05
4.98	DISCHG	28.89	28.62	28.35	28.09	27.38	26.09	24.51	22.72	20.90	19.10
4.98	ELEV	80.04	80.03	80.02	80.01	79.98	79.94	79.88	79.81	79.75	79.69
5.81	DISCHG	17.39	15.76	14.24	12.83	11.53	10.34	9.26	8.28	7.39	6.59
5.81	ELEV	79.62	79.57	79.51	79.46	79.41	79.37	79.33	79.30	79.26	79.24
6.64	DISCHG	5.86	5.22	4.64	4.12	3.66	3.24	2.88	2.55	2.26	2.00
6.64	ELEV	79.21	79.19	79.17	79.15	79.13	79.12	79.10	79.09	79.08	79.07
7.47	DISCHG	1.77	1.57	1.39	1.23	1.08	.96	.85	.75	.66	.58
7.47	ELEV	79.06	79.06	79.05	79.04	79.04	79.03	79.03	79.03	79.02	79.02
8.30	DISCHG	.52	.46	.40	.36	.31	.28	.25	.22	.19	.17
8.30	ELEV	79.02	79.02	79.01	79.01	79.01	79.01	79.01	79.01	79.01	79.01
9.13	DISCHG	.15	.13	.12	.10	.09	.08	.07	.06	.05	.05
9.13	ELEV	79.01	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
9.96	DISCHG	.04	.04	.03	.03	.02	.02	.02	.02	.01	.01
9.96	ELEV	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00	79.00
10.79	DISCHG	.01	.01	.00							
10.79	ELEV	79.00	79.00	79.00							

RUNOFF VOLUME ABOVE BASEFLOW = 1.01 WATERSHED INCHES, 285.98 CFS-HRS, 23.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

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*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(113.83) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 6 %.
+ XSECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.54	113.83	(NULL)
1.10	65.46	(NULL)

TIME(HRS)		FIRST HYDROGRAPH POINT =	.00 HOURS		TIME INCREMENT =	.08 HOURS		DRAINAGE AREA =		.16 SQ.MI.
.00	DISCHG	.00	.00	.00	.09	7.06	48.81	106.75	106.31	78.79	64.93
.83	DISCHG	63.18	63.94	64.97	65.45	65.26	64.63	62.61	57.56	52.02	48.88
1.66	DISCHG	47.29	45.96	44.04	42.38	39.70	34.08	25.46	20.21	17.63	15.59
2.49	DISCHG	13.51	11.49	9.65	8.05	6.68	5.52	4.55	3.75	3.09	2.54
3.32	DISCHG	2.09	1.72	1.41	1.16	.96	.79	.65	.53	.44	.36
4.15	DISCHG	.29	.24	.20	.16	.13	.11	.09	.07	.06	.05
4.98	DISCHG	.04	.03	.03	.02	.02	.01	.01	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = 1.18 WATERSHED INCHES, 118.94 CFS-HRS, 9.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.91	85.86	(NULL)
2.17	88.90	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.01 WATERSHED INCHES, 285.97 CFS-HRS, 23.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	127.88	(NULL)
.92	149.83	(NULL)
1.96	124.87	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.06 WATERSHED INCHES, 404.91 CFS-HRS, 33.46 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.47	143.93	(RUNOFF)
1.21	36.85	(RUNOFF)
1.66	22.95	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.17 WATERSHED INCHES, 75.76 CFS-HRS, 6.26 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION ADDHYD STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	254.09	41.63
.91	185.07	39.62
1.87	145.76	38.81

TIME(HRS)		FIRST HYDROGRAPH POINT =	.00 HOURS		TIME INCREMENT =	.08 HOURS		DRAINAGE AREA =		.69 SQ.MI.
.00	DISCHG	.00	.00	.00	.22	33.19	176.70	252.83	211.15	177.55	177.50
.00	ELEV	34.00	34.00	34.00	34.02	35.92	39.45	41.59	40.25	39.47	39.47
.83	DISCHG	183.59	185.06	183.02	179.44	175.83	172.99	165.45	153.33	145.61	143.80
.83	ELEV	39.59	39.62	39.58	39.51	39.43	39.37	39.22	38.97	38.81	38.77
1.66	DISCHG	144.78	144.72	145.21	145.45	142.39	129.04	115.27	108.49	102.94	96.60
1.66	ELEV	38.79	38.79	38.80	38.81	38.74	38.47	38.18	38.05	37.91	37.73
2.49	DISCHG	89.65	82.80	76.30	70.13	64.29	58.89	54.22	50.34	47.13	44.51
2.49	ELEV	37.53	37.34	37.16	36.98	36.82	36.67	36.54	36.43	36.34	36.27
3.32	DISCHG	42.36	40.59	39.13	37.90	36.87	35.99	35.22	34.55	33.96	33.43
3.32	ELEV	36.20	36.16	36.11	36.08	36.05	36.03	36.00	35.98	35.95	35.93
4.15	DISCHG	32.95	32.51	32.10	31.71	31.35	31.00	30.67	30.35	30.05	29.74
4.15	ELEV	35.91	35.89	35.87	35.86	35.84	35.83	35.81	35.80	35.79	35.77
4.98	DISCHG	29.45	29.16	28.88	28.61	28.33	27.83	26.90	25.62	24.08	22.38
4.98	ELEV	35.76	35.75	35.74	35.73	35.71	35.69	35.65	35.60	35.53	35.46
5.81	DISCHG	20.62	18.89	17.22	15.62	14.13	12.74	11.46	10.28	9.21	8.23
5.81	ELEV	35.39	35.31	35.24	35.17	35.11	35.05	34.99	34.89	34.80	34.71
6.64	DISCHG	7.35	6.56	5.84	5.20	4.62	4.10	3.64	3.23	2.87	2.54
6.64	ELEV	34.64	34.57	34.51	34.45	34.40	34.36	34.32	34.28	34.25	34.22
7.47	DISCHG	2.25	1.99	1.76	1.56	1.38	1.22	1.08	.96	.85	.75
7.47	ELEV	34.19	34.17	34.15	34.14	34.12	34.11	34.09	34.08	34.07	34.06
8.30	DISCHG	.66	.58	.51	.45	.40	.35	.31	.28	.24	.22
8.30	ELEV	34.06	34.05	34.04	34.04	34.03	34.03	34.03	34.02	34.02	34.02
9.13	DISCHG	.19	.17	.15	.13	.12	.10	.09	.08	.07	.06
9.13	ELEV	34.02	34.01	34.01	34.01	34.01	34.01	34.01	34.01	34.01	34.01

9.96	DISCHG	.05	.05	.04	.04	.03	.03	.02	.02	.02	.02
9.96	ELEV	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00	34.00
10.79	DISCHG	.01	.01	.01	.00						
10.79	ELEV	34.00	34.00	34.00	34.00						

RUNOFF VOLUME ABOVE BASEFLOW = 1.07 WATERSHED INCHES, 480.67 CFS-HRS, 39.72 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	254.09	(NULL)
.91	185.07	(NULL)
1.87	145.76	(NULL)

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TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .69 SQ.MI.

.00	DISCHG	.00	.00	.00	.22	33.19	176.70	252.83	211.15	177.55	177.50
.83	DISCHG	183.59	185.06	183.02	179.44	175.83	172.99	165.45	153.33	145.61	143.80
1.66	DISCHG	144.78	144.72	145.21	145.45	142.39	129.04	115.27	108.49	102.94	96.60
2.49	DISCHG	89.65	82.80	76.30	70.13	64.29	58.89	54.22	50.34	47.13	44.51
3.32	DISCHG	42.36	40.59	39.13	37.90	36.87	35.99	35.22	34.55	33.96	33.43
4.15	DISCHG	32.95	32.51	32.10	31.71	31.35	31.00	30.67	30.35	30.05	29.74
4.98	DISCHG	29.45	29.16	28.88	28.61	28.33	27.83	26.90	25.62	24.08	22.38
5.81	DISCHG	20.62	18.89	17.22	15.62	14.13	12.74	11.46	10.28	9.21	8.23
6.64	DISCHG	7.35	6.56	5.84	5.20	4.62	4.10	3.64	3.23	2.87	2.54
7.47	DISCHG	2.25	1.99	1.76	1.56	1.38	1.22	1.08	.96	.85	.75
8.30	DISCHG	.66	.58	.51	.45	.40	.35	.31	.28	.24	.22
9.13	DISCHG	.19	.17	.15	.13	.12	.10	.09	.08	.07	.06
9.96	DISCHG	.05	.05	.04	.04	.03	.03	.02	.02	.02	.02
10.79	DISCHG	.01	.01	.01	.00						

RUNOFF VOLUME ABOVE BASEFLOW = 1.07 WATERSHED INCHES, 480.67 CFS-HRS, 39.72 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.12	179.50	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.07 WATERSHED INCHES, 480.31 CFS-HRS, 39.69 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 4

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(92.07) AT EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 5 %.
+ XSECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.53	92.07	(RUNOFF)
1.22	25.60	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .07 SQ.MI.

.00	DISCHG	.00	.00	.00	.19	7.54	42.84	87.54	84.47	59.35	42.26
.83	DISCHG	33.40	28.30	26.14	25.49	25.42	25.55	24.82	21.77	18.27	16.54
1.66	DISCHG	16.07	15.99	15.60	15.38	14.30	10.87	5.10	1.81	.65	.22
2.49	DISCHG	.07	.01	.00							

RUNOFF VOLUME ABOVE BASEFLOW = 1.26 WATERSHED INCHES, 55.20 CFS-HRS, 4.56 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 5

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.52	124.68	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.71 WATERSHED INCHES, 67.16 CFS-HRS, 5.55 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.64	216.98	(NULL)
1.12	204.95	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .76 SQ.MI.

.00	DISCHG	.00	.00	.00	.19	7.61	54.07	154.48	214.01	216.37	206.19
.83	DISCHG	201.90	201.89	203.59	204.81	204.78	203.72	201.24	194.50	184.47	175.80
1.66	DISCHG	170.13	166.93	164.44	163.00	161.18	156.25	144.97	133.40	124.46	117.01
2.49	DISCHG	110.05	103.15	96.29	89.56	83.01	76.71	70.71	65.15	60.16	55.78
3.32	DISCHG	51.98	48.74	46.00	43.68	41.74	40.10	38.71	37.54	36.53	35.67
4.15	DISCHG	34.91	34.25	33.66	33.13	32.65	32.22	31.81	31.42	31.06	30.72
4.98	DISCHG	30.39	30.07	29.77	29.47	29.18	28.89	28.53	27.98	27.19	26.14
5.81	DISCHG	24.87	23.44	21.91	20.33	18.74	17.19	15.69	14.26	12.92	11.67
6.64	DISCHG	10.51	9.45	8.47	7.59	6.78	6.05	5.40	4.81	4.28	3.80
7.47	DISCHG	3.38	3.00	2.66	2.36	2.09	1.85	1.64	1.45	1.28	1.13
8.30	DISCHG	1.00	.89	.78	.69	.61	.54	.48	.42	.37	.33
9.13	DISCHG	.29	.25	.22	.20	.17	.15	.14	.12	.10	.09
9.96	DISCHG	.08	.07	.06	.05	.05	.04	.04	.03	.03	.02
10.79	DISCHG	.02	.02	.01	.01	.01	.00				

RUNOFF VOLUME ABOVE BASEFLOW = 1.09 WATERSHED INCHES, 535.51 CFS-HRS, 44.25 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.59	319.97	(NULL)
1.08	231.25	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.13 WATERSHED INCHES, 602.68 CFS-HRS, 49.81 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.77	267.34	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.14 WATERSHED INCHES, 602.97 CFS-HRS, 49.83 ACRE-FEET; BASEFLOW = .00 CFS

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OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	110.85	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.22 WATERSHED INCHES, 80.38 CFS-HRS, 6.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	150.14	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.22 WATERSHED INCHES, 133.12 CFS-HRS, 11.00 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	249.88	72.17

RUNOFF VOLUME ABOVE BASEFLOW = 1.22 WATERSHED INCHES, 213.50 CFS-HRS, 17.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)

1.92 62.71 70.68

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .27 SQ.MI.

.00	ELEV	70.00	70.00	70.00	70.00	70.00	70.02	70.06	70.15	70.25	70.35
.83	ELEV	70.42	70.48	70.52	70.55	70.58	70.61	70.63	70.65	70.66	70.67
1.66	ELEV	70.68	70.68	70.68	70.68	70.68	70.68	70.67	70.66	70.64	70.62
2.49	ELEV	70.60	70.58	70.56	70.53	70.51	70.49	70.47	70.45	70.43	70.41
3.32	ELEV	70.40	70.38	70.37	70.35	70.34	70.32	70.31	70.30	70.28	70.27
4.15	ELEV	70.26	70.25	70.24	70.23	70.22	70.21	70.20	70.19	70.19	70.18
4.98	ELEV	70.17	70.16	70.16	70.15	70.14	70.14	70.13	70.13	70.12	70.12
5.81	ELEV	70.11	70.11	70.10	70.10	70.10	70.09	70.09	70.08	70.08	70.08

1

6.64	ELEV	70.07	70.07	70.07	70.07	70.06	70.06	70.06	70.06	70.05	70.05
7.47	ELEV	70.05	70.05	70.04	70.04	70.04	70.04	70.04	70.04	70.03	70.03
8.30	ELEV	70.03	70.03	70.03	70.03	70.03	70.03	70.02	70.02	70.02	70.02
9.13	ELEV	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.02	70.01	70.01
9.96	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
10.79	ELEV	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01	70.01
11.62	ELEV	70.01	70.01	70.01	70.01	70.00	70.00	70.00	70.00	70.00	70.00
12.45	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
13.28	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.11	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
14.94	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
15.77	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
16.60	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
17.43	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
18.26	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00	70.00
19.09	ELEV	70.00	70.00	70.00	70.00	70.00	70.00	70.00			

RUNOFF VOLUME ABOVE BASEFLOW = 1.22 WATERSHED INCHES, 213.45 CFS-HRS, 17.64 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 61

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.50	62.75	(RUNOFF)
1.21	13.79	(RUNOFF)
1.62	8.44	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.45 WATERSHED INCHES, 31.78 CFS-HRS, 2.63 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 61

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	69.18	(NULL)
1.76	70.90	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.25 WATERSHED INCHES, 245.22 CFS-HRS, 20.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.05	69.27	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.25 WATERSHED INCHES, 245.25 CFS-HRS, 20.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	197.24	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 159.88 CFS-HRS, 13.21 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	229.98	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.35 WATERSHED INCHES, 405.12 CFS-HRS, 33.48 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	485.01	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.21 WATERSHED INCHES, 1008.09 CFS-HRS, 83.31 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 8 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.83	476.37	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.21 WATERSHED INCHES, 1007.83 CFS-HRS, 83.29 ACRE-FEET; BASEFLOW = .00 CFS

1

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.67	130.84	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.45 WATERSHED INCHES, 108.73 CFS-HRS, 8.99 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.79	579.76	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.23 WATERSHED INCHES, 1116.56 CFS-HRS, 92.27 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 9 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.93	558.17	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.23 WATERSHED INCHES, 1116.64 CFS-HRS, 92.28 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	136.53	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.26 WATERSHED INCHES, 119.58 CFS-HRS, 9.88 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 9

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.91	646.87	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 1.55 SQ.MI.

.00	DISCHG	.00	.00	.00	.25	4.87	30.54	100.57	219.45	370.64	526.95
.83	DISCHG	625.17	646.70	616.81	571.17	530.38	501.17	482.68	470.45	459.95	447.90
1.66	DISCHG	432.41	414.19	396.24	381.19	369.37	358.61	345.85	329.23	307.82	281.55
2.49	DISCHG	254.51	230.42	210.78	194.97	181.88	170.52	160.25	150.69	141.65	133.04
3.32	DISCHG	124.87	117.19	110.07	103.55	97.62	92.29	87.53	83.27	79.48	76.09
4.15	DISCHG	73.05	70.31	67.83	65.58	63.51	61.60	59.84	58.19	56.64	55.19
4.98	DISCHG	53.82	52.51	51.27	50.09	48.96	47.88	46.83	45.83	44.87	43.92

1

5.81	DISCHG	42.93	41.83	40.57	39.13	37.51	35.74	33.87	31.94	29.98	28.04
6.64	DISCHG	26.14	24.31	22.56	20.91	19.35	17.90	16.55	15.30	14.14	13.08
7.47	DISCHG	12.10	11.20	10.38	9.63	8.94	8.30	7.72	7.19	6.71	6.26
8.30	DISCHG	5.85	5.48	5.13	4.81	4.52	4.25	4.00	3.77	3.56	3.36
9.13	DISCHG	3.17	3.00	2.84	2.69	2.56	2.42	2.30	2.19	2.08	1.98
9.96	DISCHG	1.88	1.79	1.71	1.63	1.55	1.48	1.41	1.35	1.29	1.23
10.79	DISCHG	1.18	1.12	1.07	1.03	.98	.94	.90	.86	.82	.78
11.62	DISCHG	.75	.71	.68	.66	.63	.60	.58	.56	.53	.51
12.45	DISCHG	.49	.47	.45	.43	.41	.39	.38	.36	.35	.33
13.28	DISCHG	.32	.31	.29	.28	.27	.26	.25	.24	.23	.22
14.11	DISCHG	.21	.20	.19	.18	.18	.17	.16	.16	.15	.14
14.94	DISCHG	.14	.13	.13	.12	.12	.11	.10	.10	.10	.09
15.77	DISCHG	.09	.08	.08	.08	.07	.07	.07	.06	.06	.06
16.60	DISCHG	.06	.05	.05	.05	.05	.05	.04	.04	.04	.04
17.43	DISCHG	.04	.03	.03	.03	.03	.03	.03	.03	.03	.03
18.26	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.02	.01
19.09	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
19.92	DISCHG	.01	.00								

RUNOFF VOLUME ABOVE BASEFLOW = 1.24 WATERSHED INCHES, 1236.22 CFS-HRS, 102.16 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	219.46	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 139.53 CFS-HRS, 11.53 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.84	148.17	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 139.58 CFS-HRS, 11.53 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	160.98	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 103.52 CFS-HRS, 8.55 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 20

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	230.62	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 243.09 CFS-HRS, 20.09 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.12	175.76	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 243.12 CFS-HRS, 20.09 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	113.36	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.79 WATERSHED INCHES, 87.87 CFS-HRS, 7.26 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	142.85	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.79 WATERSHED INCHES, 93.50 CFS-HRS, 7.73 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD STRUCTURE 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.04	219.75	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.61 WATERSHED INCHES, 330.99 CFS-HRS, 27.35 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.34	236.94	(NULL)

RUNOFF VOLUME ABOVE BASEFLOW = 1.65 WATERSHED INCHES, 424.46 CFS-HRS, 35.08 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 22
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.44	325.29	(RUNOFF)
1.20	54.16	(RUNOFF)
1.65	33.24	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.80 WATERSHED INCHES, 145.09 CFS-HRS, 11.99 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.45	339.72	(NULL)
1.24	289.43	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = .52 SQ.MI.

.00	DISCHG	.00	.00	3.60	47.48	154.55	326.29	300.31	213.01	198.54	218.04
.83	DISCHG	235.68	251.59	265.99	276.99	284.86	289.43	284.36	273.19	264.98	258.02

1.66	DISCHG	250.59	239.78	229.62	218.24	203.31	178.74	159.75	147.79	135.93	123.78
2.49	DISCHG	111.72	100.07	88.93	78.39	68.53	59.42	51.13	43.67	37.05	31.24
3.32	DISCHG	26.19	21.85	18.14	15.00	12.35	10.14	8.30	6.77	5.51	4.47
4.15	DISCHG	3.62	2.92	2.36	1.90	1.53	1.22	.98	.78	.63	.50
4.98	DISCHG	.40	.32	.25	.20	.16	.13	.10	.08	.06	.05
5.81	DISCHG	.04	.03	.02	.02	.01	.01	.01	.00		

RUNOFF VOLUME ABOVE BASEFLOW = 1.68 WATERSHED INCHES, 569.56 CFS-HRS, 47.07 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.93	899.43	(NULL)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .08 HOURS DRAINAGE AREA = 2.07 SQ.MI.

.00	DISCHG	.00	.00	3.60	47.73	159.43	356.83	400.87	432.46	569.17	744.99
.83	DISCHG	860.85	898.29	882.80	848.16	815.24	790.61	767.04	743.63	724.93	705.92
1.66	DISCHG	683.00	653.96	625.86	599.43	572.69	537.35	505.60	477.03	443.74	405.32
2.49	DISCHG	366.23	330.49	299.71	273.37	250.41	229.94	211.37	194.36	178.70	164.28
3.32	DISCHG	151.06	139.04	128.21	118.54	109.98	102.43	95.82	90.04	84.98	80.56
4.15	DISCHG	76.67	73.24	70.19	67.48	65.04	62.83	60.82	58.97	57.27	55.69
4.98	DISCHG	54.21	52.83	51.52	50.29	49.12	48.00	46.93	45.91	44.93	43.97
5.81	DISCHG	42.96	41.85	40.59	39.14	37.52	35.75	33.88	31.94	29.98	28.04
6.64	DISCHG	26.14	24.31	22.56	20.91	19.35	17.90	16.55	15.30	14.14	13.08
7.47	DISCHG	12.10	11.20	10.38	9.63	8.94	8.30	7.72	7.19	6.71	6.26
8.30	DISCHG	5.85	5.48	5.13	4.81	4.52	4.25	4.00	3.77	3.56	3.36
9.13	DISCHG	3.17	3.00	2.84	2.69	2.56	2.42	2.30	2.19	2.08	1.98
9.96	DISCHG	1.88	1.79	1.71	1.63	1.55	1.48	1.41	1.35	1.29	1.23
10.79	DISCHG	1.18	1.12	1.07	1.03	.98	.94	.90	.86	.82	.78
11.62	DISCHG	.75	.71	.68	.66	.63	.60	.58	.56	.53	.51

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12.45	DISCHG	.49	.47	.45	.43	.41	.39	.38	.36	.35	.33
13.28	DISCHG	.32	.31	.29	.28	.27	.26	.25	.24	.23	.22
14.11	DISCHG	.21	.20	.19	.18	.18	.17	.16	.16	.15	.14
14.94	DISCHG	.14	.13	.13	.12	.12	.11	.10	.10	.10	.09
15.77	DISCHG	.09	.08	.08	.08	.07	.07	.07	.06	.06	.06
16.60	DISCHG	.06	.05	.05	.05	.05	.05	.04	.04	.04	.04
17.43	DISCHG	.04	.03	.03	.03	.03	.03	.03	.03	.03	.03
18.26	DISCHG	.02	.02	.02	.02	.02	.02	.02	.02	.02	.01
19.09	DISCHG	.01	.01	.01	.01	.01	.01	.01	.01	.01	.01
19.92	DISCHG	.01	.00								

RUNOFF VOLUME ABOVE BASEFLOW = 1.35 WATERSHED INCHES, 1805.77 CFS-HRS, 149.23 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	259.22	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.61 WATERSHED INCHES, 233.18 CFS-HRS, 19.27 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.79	190.42	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.53 WATERSHED INCHES, 195.00 CFS-HRS, 16.11 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.71	174.68	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.78 WATERSHED INCHES, 155.26 CFS-HRS, 12.83 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RUNOFF CROSS SECTION 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.54	64.74	(RUNOFF)

RUNOFF VOLUME ABOVE BASEFLOW = 1.56 WATERSHED INCHES, 39.17 CFS-HRS, 3.24 ACRE-FEET; BASEFLOW = .00 CFS

RECORD ID

EXECUTIVE CONTROL OPERATION ENDCMP

+ COMPUTATIONS COMPLETED FOR PASS 4

1

TR20 XEQ STRATTON BASIN EX. FACILITIES/FULL DEV. - 10 & 100 YEAR FLOWS JOB 1 PASS 5
REV 09/01/83 24-HR/AMC II STORM #1: 100 YR. STORM #2: 10 YEAR PAGE 84

RECORD ID

EXECUTIVE CONTROL OPERATION ENDJOB

1

TR20 XEQ STRATTON BASIN EX. FACILITIES/FULL DEV. - 10 & 100 YEAR FLOWS JOB 1 SUMMARY
REV 09/01/83 24-HR/AMC II STORM #1: 100 YR. STORM #2: 10 YEAR PAGE 85

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 1 STORM 1													
+													
XSECTION 44	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.01	---	6.14	139.43	1340.7
STRUCTURE 1	REACH	.10	7	2	.08	.0	4.50	24.00	2.01	64.53	6.47	88.86	854.4
XSECTION 45	RUNOFF	.08	7	2	.08	.0	4.50	24.00	2.01	---	6.08	128.75	1551.2
XSECTION 45	ADDHYD	.19	7	2	.08	.0	4.50	24.00	2.01	---	6.14	157.54	842.5
STRUCTURE 1	RUNOFF	.14	7	2	.08	.0	4.50	24.00	2.01	---	6.03	246.50	1825.9
STRUCTURE 1	ADDHYD	.32	7	2	.08	.0	4.50	24.00	2.01	64.90	6.05	389.76	1210.4
STRUCTURE 1	RESVOR	.32	7	2	.08	.0	4.50	24.00	2.01	64.78	6.25	261.61	812.5
STRUCTURE 2	RUNOFF	.06	7	2	.08	.0	4.50	24.00	2.42	---	6.06	125.96	1999.4
XSECTION 1	REACH	.32	7	2	.08	.0	4.50	24.00	2.00	---	6.60	140.30	435.7
XSECTION 2	REACH	.06	7	2	.08	.0	4.50	24.00	2.42	---	6.43	74.28	1179.0
XSECTION 1	RUNOFF	.12	7	2	.08	.0	4.50	24.00	2.14	---	6.12	176.93	1525.2
XSECTION 2	RUNOFF	.09	7	2	.08	.0	4.50	24.00	2.38	---	6.02	206.98	2225.6
STRUCTURE 3	ADDHYD	.44	7	2	.08	.0	4.50	24.00	2.03	85.99	6.34	203.63	464.9
STRUCTURE 3	RESVOR	.44	7	2	.08	.0	4.50	24.00	2.03	85.80	6.41	197.45	450.8
XSECTION 3	ADDHYD	.16	7	2	.08	.0	4.50	24.00	2.40	---	6.03	219.51	1407.1
XSECTION 3	REACH	.44	7	2	.08	.0	4.50	24.00	2.04	---	6.55	194.26	443.5
XSECTION 3	ADDHYD	.59	7	2	.08	.0	4.50	24.00	2.13	---	6.07	326.52	549.7
XSECTION 3	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.37	---	5.96	239.32	2393.2
STRUCTURE 4	ADDHYD	.69	7	2	.08	.0	4.50	24.00	2.17	44.13	6.01	511.47	737.0
STRUCTURE 99	RESVOR	.69	7	2	.08	.0	4.50	24.00	2.17	---	6.01	511.47	737.0
XSECTION 4	REACH	.69	7	2	.08	.0	4.50	24.00	2.16	---	6.15	411.15	592.4
XSECTION 4	RUNOFF	.07	7	2	.08	.0	4.50	24.00	2.55	---	6.02	161.61	2376.6
XSECTION 5	RUNOFF	.06	7	2	.08	.0	4.50	24.00	3.60	---	5.98	189.45	3105.7
XSECTION 5	ADDHYD	.76	7	2	.08	.0	4.50	24.00	2.20	---	6.09	522.02	685.1
XSECTION 5	ADDHYD	.82	7	2	.08	.0	4.50	24.00	2.30	---	6.06	693.65	842.8
XSECTION 7	REACH	.82	7	2	.08	.0	4.50	24.00	2.30	---	6.18	629.13	764.4
XSECTION 46	RUNOFF	.10	7	2	.08	.0	4.50	24.00	2.47	---	6.05	210.24	2061.1
STRUCTURE 5	RUNOFF	.17	7	2	.08	.0	4.50	24.00	2.47	---	6.11	302.31	1788.8
STRUCTURE 5	ADDHYD	.27	7	2	.08	.0	4.50	24.00	2.47	73.91	6.08	504.92	1863.2
STRUCTURE 5	RESVOR	.27	7	2	.08	.0	4.50	24.00	2.43	71.06	6.56	99.97	368.9
XSECTION 61	RUNOFF	.03	7	2	.08	.0	4.50	24.00	2.92	---	5.97	91.81	2700.3
XSECTION 61	ADDHYD	.31	7	2	.08	.0	4.50	24.00	2.49	---	6.04	135.82	445.3

1

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 1 STORM 1													
XSECTION 6	REACH	.31	7	2	.08	.0	4.50	24.00	2.48	---	6.78	103.73	340.1
XSECTION 6	RUNOFF	.16	7	2	.08	.0	4.50	24.00	3.19	---	6.09	375.29	2360.3
XSECTION 7	ADDHYD	.46	7	2	.08	.0	4.50	24.00	2.72	---	6.11	457.69	986.4
XSECTION 7	ADDHYD	1.29	7	2	.08	.0	4.50	24.00	2.45	---	6.15	1071.59	832.6
XSECTION 8	REACH	1.29	7	2	.08	.0	4.50	24.00	2.45	---	6.24	1062.01	825.2
XSECTION 8	RUNOFF	.12	7	2	.08	.0	4.50	24.00	2.91	---	6.10	247.63	2134.7
XSECTION 8	ADDHYD	1.40	7	2	.08	.0	4.50	24.00	2.49	---	6.22	1259.86	898.0
XSECTION 9	REACH	1.40	7	2	.08	.0	4.50	24.00	2.49	---	6.32	1230.93	877.4
XSECTION 9	RUNOFF	.15	7	2	.08	.0	4.50	24.00	2.55	---	6.11	272.24	1852.0
XSECTION 9	ADDHYD	1.55	7	2	.08	.0	4.50	24.00	2.49	---	6.29	1397.35	901.5
STRUCTURE 21	RUNOFF	.14	7	2	.08	.0	4.50	24.00	3.20	---	6.03	383.46	2758.7
STRUCTURE 20	REACH	.14	7	2	.08	.0	4.50	24.00	3.19	---	6.25	312.90	2251.1
STRUCTURE 20	RUNOFF	.10	7	2	.08	.0	4.50	24.00	3.19	---	6.03	280.08	2719.2
STRUCTURE 20	ADDHYD	.24	7	2	.08	.0	4.50	24.00	3.19	---	6.10	494.15	2042.0
XSECTION 21	REACH	.24	7	2	.08	.0	4.50	24.00	3.19	---	6.43	387.14	1599.8
XSECTION 21	RUNOFF	.08	7	2	.08	.0	4.50	24.00	3.81	---	6.07	213.36	2807.3
XSECTION 24	RUNOFF	.08	7	2	.08	.0	4.50	24.00	3.81	---	6.03	250.22	3089.1
STRUCTURE 21	ADDHYD	.32	7	2	.08	.0	4.50	24.00	3.34	---	6.29	479.01	1506.3
STRUCTURE 21	ADDHYD	.40	7	2	.08	.0	4.50	24.00	3.43	---	6.13	641.70	1608.3
XSECTION 22	REACH	.40	7	2	.08	.0	4.50	24.00	3.43	---	6.45	508.54	1274.5
XSECTION 22	RUNOFF	.13	7	2	.08	.0	4.50	24.00	3.81	---	5.94	430.97	3447.8
XSECTION 23	ADDHYD	.52	7	2	.08	.0	4.50	24.00	3.52	---	5.98	631.99	1206.1
XSECTION 50	ADDHYD	2.07	7	2	.08	.0	4.50	24.00	2.75	---	6.31	1916.71	924.2
XSECTION 40	RUNOFF	.22	7	2	.08	.0	4.50	24.00	3.34	---	6.13	516.27	2304.8
XSECTION 41	RUNOFF	.20	7	2	.08	.0	4.50	24.00	3.11	---	6.18	383.13	1935.0
XSECTION 42	RUNOFF	.14	7	2	.08	.0	4.50	24.00	3.79	---	6.12	347.36	2573.0
XSECTION 43	RUNOFF	.04	7	2	.08	.0	4.50	24.00	3.19	---	6.02	107.50	2756.5
ALTERNATE 1 STORM 2													
XSECTION 44	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.06	---	6.16	69.48	668.1
STRUCTURE 1	REACH	.10	7	2	.08	.0	3.20	24.00	1.06	64.06	6.59	39.73	382.0
XSECTION 45	RUNOFF	.08	7	2	.08	.0	3.20	24.00	1.06	---	6.10	65.05	783.8
XSECTION 45	ADDHYD	.19	7	2	.08	.0	3.20	24.00	1.06	---	6.12	68.85	368.2
STRUCTURE 1	RUNOFF	.14	7	2	.08	.0	3.20	24.00	1.07	---	6.04	128.26	950.1
STRUCTURE 1	ADDHYD	.32	7	2	.08	.0	3.20	24.00	1.06	64.72	6.06	192.64	598.3
STRUCTURE 1	RESVOR	.32	7	2	.08	.0	3.20	24.00	1.06	63.67	7.20	33.67	104.6
STRUCTURE 2	RUNOFF	.06	7	2	.08	.0	3.20	24.00	1.37	---	6.07	69.95	1110.3

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)

ALTERNATE 1 STORM 2

XSECTION 1	REACH	.32	7	2	.08	.0	3.20	24.00	1.05	---	7.98	32.90	102.2
XSECTION 2	REACH	.06	7	2	.08	.0	3.20	24.00	1.37	---	6.47	36.76	583.5
XSECTION 1	RUNOFF	.12	7	2	.08	.0	3.20	24.00	1.16	---	6.13	91.61	789.7
XSECTION 2	RUNOFF	.09	7	2	.08	.0	3.20	24.00	1.34	---	6.03	116.82	1256.2
STRUCTURE 3	ADDHYD	.44	7	2	.08	.0	3.20	24.00	1.08	82.68	6.15	102.49	234.0
STRUCTURE 3	RESVOR	.44	7	2	.08	.0	3.20	24.00	1.08	82.67	6.16	102.33	233.6
XSECTION 3	ADDHYD	.16	7	2	.08	.0	3.20	24.00	1.35	---	6.04	120.95	775.3
XSECTION 3	REACH	.44	7	2	.08	.0	3.20	24.00	1.08	---	6.31	91.35	208.6
XSECTION 3	ADDHYD	.59	7	2	.08	.0	3.20	24.00	1.15	---	6.08	162.94	274.3
XSECTION 3	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.34	---	5.96	136.48	1364.8
STRUCTURE 4	ADDHYD	.69	7	2	.08	.0	3.20	24.00	1.18	42.25	6.01	271.16	390.7
STRUCTURE 99	RESVOR	.69	7	2	.08	.0	3.20	24.00	1.18	---	6.01	271.16	390.7
XSECTION 4	REACH	.69	7	2	.08	.0	3.20	24.00	1.18	---	6.25	200.38	288.7
XSECTION 4	RUNOFF	.07	7	2	.08	.0	3.20	24.00	1.47	---	6.03	93.90	1380.9
XSECTION 5	RUNOFF	.06	7	2	.08	.0	3.20	24.00	2.35	---	5.99	125.82	2062.6
XSECTION 5	ADDHYD	.76	7	2	.08	.0	3.20	24.00	1.20	---	6.19	227.06	298.0
XSECTION 5	ADDHYD	.82	7	2	.08	.0	3.20	24.00	1.29	---	6.07	328.65	399.3
XSECTION 7	REACH	.82	7	2	.08	.0	3.20	24.00	1.29	---	6.22	285.12	346.4
XSECTION 46	RUNOFF	.10	7	2	.08	.0	3.20	24.00	1.41	---	6.06	117.88	1155.7
STRUCTURE 5	RUNOFF	.17	7	2	.08	.0	3.20	24.00	1.41	---	6.12	167.13	988.9
STRUCTURE 5	ADDHYD	.27	7	2	.08	.0	3.20	24.00	1.41	72.40	6.09	279.61	1031.8
STRUCTURE 5	RESVOR	.27	7	2	.08	.0	3.20	24.00	1.39	70.59	6.59	54.04	199.4
XSECTION 61	RUNOFF	.03	7	2	.08	.0	3.20	24.00	1.76	---	5.99	56.34	1657.0
XSECTION 61	ADDHYD	.31	7	2	.08	.0	3.20	24.00	1.43	---	6.03	77.77	255.0
XSECTION 6	REACH	.31	7	2	.08	.0	3.20	24.00	1.42	---	6.87	55.92	183.4
XSECTION 6	RUNOFF	.16	7	2	.08	.0	3.20	24.00	1.99	---	6.10	233.11	1466.1
XSECTION 7	ADDHYD	.46	7	2	.08	.0	3.20	24.00	1.62	---	6.12	275.40	593.5
XSECTION 7	ADDHYD	1.29	7	2	.08	.0	3.20	24.00	1.41	---	6.16	549.63	427.1
XSECTION 8	REACH	1.29	7	2	.08	.0	3.20	24.00	1.41	---	6.26	538.88	418.7
XSECTION 8	RUNOFF	.12	7	2	.08	.0	3.20	24.00	1.76	---	6.11	147.66	1272.9
XSECTION 8	ADDHYD	1.40	7	2	.08	.0	3.20	24.00	1.43	---	6.23	655.32	467.1
XSECTION 9	REACH	1.40	7	2	.08	.0	3.20	24.00	1.43	---	6.34	631.80	450.3
XSECTION 9	RUNOFF	.15	7	2	.08	.0	3.20	24.00	1.47	---	6.12	152.62	1038.2
XSECTION 9	ADDHYD	1.55	7	2	.08	.0	3.20	24.00	1.44	---	6.31	722.00	465.8
STRUCTURE 21	RUNOFF	.14	7	2	.08	.0	3.20	24.00	2.00	---	6.03	241.48	1737.3
STRUCTURE 20	REACH	.14	7	2	.08	.0	3.20	24.00	1.99	---	6.19	185.63	1335.5

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
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A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)

ALTERNATE 1 STORM 2

STRUCTURE 20	RUNOFF	.10	7	2	.08	.0	3.20	24.00	2.00	---	6.04	175.96	1708.3
STRUCTURE 20	ADDHYD	.24	7	2	.08	.0	3.20	24.00	1.99	---	6.09	330.39	1365.3
XSECTION 21	REACH	.24	7	2	.08	.0	3.20	24.00	1.99	---	6.31	238.20	984.3
XSECTION 21	RUNOFF	.08	7	2	.08	.0	3.20	24.00	2.54	---	6.07	142.93	1880.7
XSECTION 24	RUNOFF	.08	7	2	.08	.0	3.20	24.00	2.54	---	6.03	168.85	2084.6
STRUCTURE 21	ADDHYD	.32	7	2	.08	.0	3.20	24.00	2.12	---	6.21	339.06	1066.2
STRUCTURE 21	ADDHYD	.40	7	2	.08	.0	3.20	24.00	2.21	---	6.12	470.42	1179.0
XSECTION 22	REACH	.40	7	2	.08	.0	3.20	24.00	2.21	---	6.48	345.97	867.1
XSECTION 22	RUNOFF	.13	7	2	.08	.0	3.20	24.00	2.54	---	5.94	295.20	2361.6
XSECTION 23	ADDHYD	.52	7	2	.08	.0	3.20	24.00	2.29	---	6.47	370.46	707.0
XSECTION 50	ADDHYD	2.07	7	2	.08	.0	3.20	24.00	1.65	---	6.34	1062.12	512.1
XSECTION 40	RUNOFF	.22	7	2	.08	.0	3.20	24.00	2.12	---	6.14	324.65	1449.3
XSECTION 41	RUNOFF	.20	7	2	.08	.0	3.20	24.00	1.92	---	6.19	231.31	1168.2

XSECTION 42	RUNOFF	.14	7	2	.08	.0	3.20	24.00	2.52	---	6.13	231.32	1713.5
XSECTION 43	RUNOFF	.04	7	2	.08	.0	3.20	24.00	2.00	---	6.02	69.60	1784.6

ALTERNATE 2 STORM 1

XSECTION 44	RUNOFF	.10	8	3	.08	.0	3.05	2.00	1.84	---	.82	153.57	1476.6
STRUCTURE 1	REACH	.10	8	3	.08	.0	3.05	2.00	1.84	64.56	1.15	103.27	992.9
XSECTION 45	RUNOFF	.08	8	3	.08	.0	3.05	2.00	1.84	---	.74	141.86	1709.2
XSECTION 45	ADDHYD	.19	8	3	.08	.0	3.05	2.00	1.84	---	.86	188.63	1008.7
STRUCTURE 1	RUNOFF	.14	8	3	.08	.0	3.05	2.00	1.84	---	.65	274.75	2035.2
STRUCTURE 1	ADDHYD	.32	8	3	.08	.0	3.05	2.00	1.84	64.94	.69	429.92	1335.2
STRUCTURE 1	RESVOR	.32	8	3	.08	.0	3.05	2.00	1.84	64.87	.94	359.57	1116.7
STRUCTURE 2	RUNOFF	.06	8	3	.08	.0	3.05	2.00	2.09	---	.70	132.93	2110.0
XSECTION 1	REACH	.32	8	3	.08	.0	3.05	2.00	1.84	---	1.30	238.37	740.3
XSECTION 2	REACH	.06	8	3	.08	.0	3.05	2.00	2.09	---	1.09	76.05	1207.1
XSECTION 1	RUNOFF	.12	8	3	.08	.0	3.05	2.00	1.92	---	.78	191.67	1652.3
XSECTION 2	RUNOFF	.09	8	3	.08	.0	3.05	2.00	2.07	---	.62	230.66	2480.2
STRUCTURE 3	ADDHYD	.44	8	3	.08	.0	3.05	2.00	1.86	92.79	1.19	327.12	746.8
STRUCTURE 3	RESVOR	.44	8	3	.08	.0	3.05	2.00	1.86	89.50	1.48	269.88	616.2
XSECTION 3	ADDHYD	.16	8	3	.08	.0	3.05	2.00	2.08	---	.64	230.44	1477.2
XSECTION 3	REACH	.44	8	3	.08	.0	3.05	2.00	1.86	---	1.61	268.56	613.1
XSECTION 3	ADDHYD	.59	8	3	.08	.0	3.05	2.00	1.92	---	1.17	366.54	617.1
XSECTION 3	RUNOFF	.10	8	3	.08	.0	3.05	2.00	2.05	---	.55	284.34	2843.4
STRUCTURE 4	ADDHYD	.69	8	3	.08	.0	3.05	2.00	1.94	44.15	.60	526.56	758.7
STRUCTURE 99	RESVOR	.69	8	3	.08	.0	3.05	2.00	1.94	---	.60	526.56	758.7

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
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A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)

ALTERNATE 2 STORM 1

XSECTION 4	REACH	.69	8	3	.08	.0	3.05	2.00	1.94	---	1.18	425.52	613.1
XSECTION 4	RUNOFF	.07	8	3	.08	.0	3.05	2.00	2.17	---	.62	179.52	2639.9
XSECTION 5	RUNOFF	.06	8	3	.08	.0	3.05	2.00	2.69	---	.60	204.57	3353.6
XSECTION 5	ADDHYD	.76	8	3	.08	.0	3.05	2.00	1.96	---	.77	504.08	661.5
XSECTION 5	ADDHYD	.82	8	3	.08	.0	3.05	2.00	2.01	---	.69	667.88	811.5
XSECTION 7	REACH	.82	8	3	.08	.0	3.05	2.00	2.01	---	.87	601.05	730.3
XSECTION 46	RUNOFF	.10	8	3	.08	.0	3.05	2.00	2.12	---	.69	223.41	2190.3
STRUCTURE 5	RUNOFF	.17	8	3	.08	.0	3.05	2.00	2.12	---	.77	315.14	1864.7
STRUCTURE 5	ADDHYD	.27	8	3	.08	.0	3.05	2.00	2.12	74.00	.74	519.85	1918.3
STRUCTURE 5	RESVOR	.27	8	3	.08	.0	3.05	2.00	2.12	71.18	1.46	116.32	429.2
XSECTION 61	RUNOFF	.03	8	3	.08	.0	3.05	2.00	2.40	---	.58	111.30	3273.5
XSECTION 61	ADDHYD	.31	8	3	.08	.0	3.05	2.00	2.15	---	1.15	130.76	428.7
XSECTION 6	REACH	.31	8	3	.08	.0	3.05	2.00	2.15	---	1.68	122.81	402.6
XSECTION 6	RUNOFF	.16	8	3	.08	.0	3.05	2.00	2.52	---	.75	361.95	2276.4
XSECTION 7	ADDHYD	.46	8	3	.08	.0	3.05	2.00	2.28	---	.77	433.86	935.0
XSECTION 7	ADDHYD	1.29	8	3	.08	.0	3.05	2.00	2.11	---	.82	1009.48	784.4
XSECTION 8	REACH	1.29	8	3	.08	.0	3.05	2.00	2.11	---	.92	1003.93	780.1
XSECTION 8	RUNOFF	.12	8	3	.08	.0	3.05	2.00	2.40	---	.76	249.80	2153.5
XSECTION 8	ADDHYD	1.40	8	3	.08	.0	3.05	2.00	2.13	---	.89	1206.00	859.6
XSECTION 9	REACH	1.40	8	3	.08	.0	3.05	2.00	2.13	---	1.01	1182.59	842.9
XSECTION 9	RUNOFF	.15	8	3	.08	.0	3.05	2.00	2.17	---	.77	281.66	1916.0
XSECTION 9	ADDHYD	1.55	8	3	.08	.0	3.05	2.00	2.14	---	.98	1376.99	888.4
STRUCTURE 21	RUNOFF	.14	8	3	.08	.0	3.05	2.00	2.52	---	.66	389.00	2798.6
STRUCTURE 20	REACH	.14	8	3	.08	.0	3.05	2.00	2.52	---	.84	287.88	2071.1
STRUCTURE 20	RUNOFF	.10	8	3	.08	.0	3.05	2.00	2.52	---	.66	282.51	2742.8
STRUCTURE 20	ADDHYD	.24	8	3	.08	.0	3.05	2.00	2.52	---	.75	507.27	2096.2
XSECTION 21	REACH	.24	8	3	.08	.0	3.05	2.00	2.52	---	1.01	381.81	1577.7

XSECTION	21	RUNOFF	.08	8	3	.08	.0	3.05	2.00	2.77	---	.74	191.55	2520.4
XSECTION	24	RUNOFF	.08	8	3	.08	.0	3.05	2.00	2.77	---	.67	234.24	2891.9
STRUCTURE	21	ADDHYD	.32	8	3	.08	.0	3.05	2.00	2.58	---	.92	510.31	1604.7
STRUCTURE	21	ADDHYD	.40	8	3	.08	.0	3.05	2.00	2.62	---	.82	659.66	1653.3
XSECTION	22	REACH	.40	8	3	.08	.0	3.05	2.00	2.62	---	1.18	528.10	1323.5
XSECTION	22	RUNOFF	.13	8	3	.08	.0	3.05	2.00	2.75	---	.53	504.79	4038.3
XSECTION	23	ADDHYD	.52	8	3	.08	.0	3.05	2.00	2.65	---	1.09	619.42	1182.1
XSECTION	50	ADDHYD	2.07	8	3	.08	.0	3.05	2.00	2.26	---	1.01	1967.53	948.7
XSECTION	40	RUNOFF	.22	8	3	.08	.0	3.05	2.00	2.58	---	.81	470.03	2098.3

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A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 2 STORM 1													
XSECTION 41	RUNOFF	.20	8	3	.08	.0	3.05	2.00	2.49	---	.88	360.05	1818.4
XSECTION 42	RUNOFF	.14	8	3	.08	.0	3.05	2.00	2.76	---	.81	297.40	2202.9
XSECTION 43	RUNOFF	.04	8	3	.08	.0	3.05	2.00	2.52	---	.63	113.30	2905.1
ALTERNATE 2 STORM 2													
XSECTION 44	RUNOFF	.10	9	3	.08	.0	2.06	2.00	.99	---	.74	65.36	628.4
STRUCTURE 1	REACH	.10	9	3	.08	.0	2.06	2.00	.99	64.06	1.16	40.05	385.1
XSECTION 45	RUNOFF	.08	9	3	.08	.0	2.06	2.00	.99	---	.65	61.82	744.8
XSECTION 45	ADDHYD	.19	9	3	.08	.0	2.06	2.00	.99	---	.72	75.39	403.1
STRUCTURE 1	RUNOFF	.14	9	3	.08	.0	2.06	2.00	.99	---	.57	123.74	916.6
STRUCTURE 1	ADDHYD	.32	9	3	.08	.0	2.06	2.00	.99	64.71	.60	187.51	582.3
STRUCTURE 1	RESVOR	.32	9	3	.08	.0	2.06	2.00	.99	64.51	1.84	79.08	245.6
STRUCTURE 2	RUNOFF	.06	9	3	.08	.0	2.06	2.00	1.20	---	.61	64.70	1027.0
XSECTION 1	REACH	.32	9	3	.08	.0	2.06	2.00	.99	---	2.22	68.66	213.2
XSECTION 2	REACH	.06	9	3	.08	.0	2.06	2.00	1.20	---	1.11	32.16	510.5
XSECTION 1	RUNOFF	.12	9	3	.08	.0	2.06	2.00	1.06	---	.70	84.70	730.2
XSECTION 2	RUNOFF	.09	9	3	.08	.0	2.06	2.00	1.17	---	.54	113.65	1222.1
STRUCTURE 3	ADDHYD	.44	9	3	.08	.0	2.06	2.00	1.01	82.40	.73	94.94	216.8
STRUCTURE 3	RESVOR	.44	9	3	.08	.0	2.06	2.00	1.01	82.41	.74	95.04	217.0
XSECTION 3	ADDHYD	.16	9	3	.08	.0	2.06	2.00	1.18	---	.54	113.83	729.6
XSECTION 3	REACH	.44	9	3	.08	.0	2.06	2.00	1.01	---	2.17	88.90	203.0
XSECTION 3	ADDHYD	.59	9	3	.08	.0	2.06	2.00	1.06	---	.92	149.83	252.2
XSECTION 3	RUNOFF	.10	9	3	.08	.0	2.06	2.00	1.17	---	.47	143.93	1439.3
STRUCTURE 4	ADDHYD	.69	9	3	.08	.0	2.06	2.00	1.07	41.63	.51	254.09	366.1
STRUCTURE 99	RESVOR	.69	9	3	.08	.0	2.06	2.00	1.07	---	.51	254.09	366.1
XSECTION 4	REACH	.69	9	3	.08	.0	2.06	2.00	1.07	---	1.12	179.50	258.6
XSECTION 4	RUNOFF	.07	9	3	.08	.0	2.06	2.00	1.26	---	.53	92.07	1354.0
XSECTION 5	RUNOFF	.06	9	3	.08	.0	2.06	2.00	1.71	---	.52	124.68	2043.9
XSECTION 5	ADDHYD	.76	9	3	.08	.0	2.06	2.00	1.09	---	.64	216.98	284.8
XSECTION 5	ADDHYD	.82	9	3	.08	.0	2.06	2.00	1.13	---	.59	319.97	388.8
XSECTION 7	REACH	.82	9	3	.08	.0	2.06	2.00	1.14	---	.77	267.34	324.8
XSECTION 46	RUNOFF	.10	9	3	.08	.0	2.06	2.00	1.22	---	.60	110.85	1086.7
STRUCTURE 5	RUNOFF	.17	9	3	.08	.0	2.06	2.00	1.22	---	.69	150.14	888.4
STRUCTURE 5	ADDHYD	.27	9	3	.08	.0	2.06	2.00	1.22	72.17	.65	249.88	922.1
STRUCTURE 5	RESVOR	.27	9	3	.08	.0	2.06	2.00	1.22	70.68	1.92	62.71	231.4
XSECTION 61	RUNOFF	.03	9	3	.08	.0	2.06	2.00	1.45	---	.50	62.75	1845.5
XSECTION 61	ADDHYD	.31	9	3	.08	.0	2.06	2.00	1.25	---	1.76	70.90	232.5

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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION BEGIN (HR)	PRECIPITATION AMOUNT (IN)	PRECIPITATION DURATION (HR)	RUNOFF AMOUNT (IN)	PEAK DISCHARGE ELEVATION (FT)	PEAK DISCHARGE TIME (HR)	PEAK DISCHARGE RATE (CFS)	PEAK DISCHARGE RATE (CSM)
ALTERNATE 2 STORM 2													
XSECTION 6	REACH	.31	9	3	.08	.0	2.06	2.00	1.25	---	2.05	69.27	227.1
XSECTION 6	RUNOFF	.16	9	3	.08	.0	2.06	2.00	1.56	---	.66	197.24	1240.5
XSECTION 7	ADDHYD	.46	9	3	.08	.0	2.06	2.00	1.35	---	.68	229.98	495.6
XSECTION 7	ADDHYD	1.29	9	3	.08	.0	2.06	2.00	1.21	---	.72	485.01	376.9
XSECTION 8	REACH	1.29	9	3	.08	.0	2.06	2.00	1.21	---	.83	476.37	370.1
XSECTION 8	RUNOFF	.12	9	3	.08	.0	2.06	2.00	1.45	---	.67	130.84	1127.9
XSECTION 8	ADDHYD	1.40	9	3	.08	.0	2.06	2.00	1.23	---	.79	579.76	413.2
XSECTION 9	REACH	1.40	9	3	.08	.0	2.06	2.00	1.23	---	.93	558.17	397.8
XSECTION 9	RUNOFF	.15	9	3	.08	.0	2.06	2.00	1.26	---	.68	136.53	928.8
XSECTION 9	ADDHYD	1.55	9	3	.08	.0	2.06	2.00	1.24	---	.91	646.87	417.3
STRUCTURE 21	RUNOFF	.14	9	3	.08	.0	2.06	2.00	1.56	---	.57	219.46	1578.8
STRUCTURE 20	REACH	.14	9	3	.08	.0	2.06	2.00	1.56	---	.84	148.17	1066.0
STRUCTURE 20	RUNOFF	.10	9	3	.08	.0	2.06	2.00	1.56	---	.57	160.98	1562.9
STRUCTURE 20	ADDHYD	.24	9	3	.08	.0	2.06	2.00	1.56	---	.74	230.62	953.0
XSECTION 21	REACH	.24	9	3	.08	.0	2.06	2.00	1.56	---	1.12	175.76	726.3
XSECTION 21	RUNOFF	.08	9	3	.08	.0	2.06	2.00	1.79	---	.65	113.36	1491.6
XSECTION 24	RUNOFF	.08	9	3	.08	.0	2.06	2.00	1.79	---	.58	142.85	1763.6
STRUCTURE 21	ADDHYD	.32	9	3	.08	.0	2.06	2.00	1.61	---	1.04	219.75	691.0
STRUCTURE 21	ADDHYD	.40	9	3	.08	.0	2.06	2.00	1.65	---	.68	288.29	722.5
XSECTION 22	REACH	.40	9	3	.08	.0	2.06	2.00	1.65	---	1.34	236.94	593.8
XSECTION 22	RUNOFF	.13	9	3	.08	.0	2.06	2.00	1.80	---	.44	325.29	2602.3
XSECTION 23	ADDHYD	.52	9	3	.08	.0	2.06	2.00	1.68	---	.45	339.72	648.3
XSECTION 50	ADDHYD	2.07	9	3	.08	.0	2.06	2.00	1.35	---	.93	899.43	433.7
XSECTION 40	RUNOFF	.22	9	3	.08	.0	2.06	2.00	1.61	---	.72	259.22	1157.2
XSECTION 41	RUNOFF	.20	9	3	.08	.0	2.06	2.00	1.53	---	.79	190.42	961.7
XSECTION 42	RUNOFF	.14	9	3	.08	.0	2.06	2.00	1.78	---	.71	174.68	1293.9
XSECTION 43	RUNOFF	.04	9	3	.08	.0	2.06	2.00	1.56	---	.54	64.74	1660.0

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SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS
(A STAR(*) AFTER VOLUME ABOVE BASE(IN)' INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

XSEC ID	REACH LENGTH (FT)	HYDROGRAPH INFORMATION INFLOW PEAK (CFS)	INFLOW TIME (HR)	OUTFLOW PEAK (CFS)	OUTFLOW TIME (HR)	OUTFLOW+ INTERV.AREA PEAK (CFS)	INTERV.AREA TIME (HR)	BASE-FLOW (CFS)	ROUTING PARAMETERS VOLUME ABOVE BASE (IN)	MAIN TIME INCR (HR)	ITER-ATION #	Q AND A EQUATION COEFF (X)	Q AND A EQUATION POWER (M)	LENGTH FACTOR (K*)	PEAK RATIO O/I (Q*)	S/Q *PEAK (K) (SEC)	ATT-KIN COEFF (C)	PEAK TRAVEL TIME STOR-AGE (HR)	PEAK TRAVEL TIME KINE-MATIC (HR)
ALTERNATE 1 STORM 1																			
0	3300	139	6.1	89	6.5	---	---	0	2.01	.08	1	.500	1.33	.365	.637	1227	.22	.25	.36
1	3000	251	6.2	140	6.6	---	---	0	2.01	.08	1	.500	1.33	.128	.557	964	.27	.41	.29
2	3400	126	6.1	74	6.5			0	2.42	.08	1	.500	1.33	.521	.584	1297	.21	.25	.38

													.500					
3	1000	197	6.4	194	6.6			0	2.03	.08	1		1.33	.015	.985	341	.61	.17	.09
						326	6.1												
													.500					
4	2300	503	6.0	410	6.1			0	2.17	.08	1		1.33	.059	.817	622	.39	.17	.18
						---	---												
													.500					
7	1500	694	6.1	617	6.1			0	2.30	.08	1		1.33	.034	.890	375	.57	.08	.11
						---	---												
													.500					
6	2700	134	6.1	104	6.8			0	2.49	.08	1		1.33	.048	.772	1014	.26	.75	.29
						---	---												
													.500					
8	800	1070	6.1	1058	6.2			0	2.45	.08	1		1.33	.012	.989	179	.91?	.08	.05
						1259	6.2												
													.500					
9	1100	1259	6.2	1229	6.3			0	2.49	.08	1		1.33	.018	.976	237	.77?	.08	.07
						1394	6.3												
													.500					
0	2200	376	6.1	310	6.2			0	3.20	.08	1		1.33	.211	.824	640	.38	.08	.18
						489	6.1												
													.500					
21	3200	489	6.1	385	6.4			0	3.19	.08	1		1.33	.216	.787	872	.29	.17	.25
						---	---												
													.500					
22	4000	641	6.1	508	6.5			0	3.43	.08	1		1.33	.178	.792	1019	.26	.33	.29
						---	---												

ALTERNATE 1 STORM 2

													.500					
0	3300	69	6.1	39	6.6			0	1.06	.08	1		1.33	.421	.570	1461	.19	.25	.43
						---	---												
													.500					
1	3000	34	7.2	33	8.0			0	1.06	.08	1		1.33	.041	.977	1587	.17	.75	.44
						---	---												
													.500					
2	3400	70	6.1	37	6.5			0	1.37	.08	1		1.33	.614	.526	1501	.18	.25	.45
						---	---												
													.500					
3	1000	102	6.1	91	6.3			0	1.08	.08	1		1.33	.018	.897	402	.54	.17	.11
						162	6.1												
													.500					
4	2300	265	6.0	199	6.2			0	1.18	.08	1		1.33	.070	.749	729	.34	.17	.21
						---	---												
													.500					
7	1500	328	6.1	285	6.2			0	1.29	.08	1		1.33	.035	.868	451	.50	.17	.13
						---	---												
													.500					
6	2700	77	6.1	56	6.9			0	1.43	.08	1		1.33	.058	.729	1165	.23	.83	.34
						---	---												
													.500					
8	800	548	6.1	533	6.2			0	1.41	.08	1		1.33	.012	.973	212	.83?	.08	.06
						655	6.2												
													.500					
9	1100	655	6.2	626	6.3			0	1.43	.08	1		1.33	.020	.955	279	.70?	.08	.08
						722	6.3												
													.500					
0	2200	239	6.1	183	6.2			0	2.00	.08	1		1.33	.250	.767	716	.35	.17	.21
						326	6.1												
													.500					
21	3200	326	6.1	238	6.3			0	1.99	.08	1		1.33	.269	.732	964	.27	.25	.28
						---	---												
													.500					
22	4000	469	6.1	346	6.5			0	2.21	.08	1		1.33	.234	.737	1101	.24	.25	.32
						---	---												

ALTERNATE 2 STORM 1

													.500					
0	3300	153	.8	103	1.2			0	1.84	.08	1		1.33	.453	.673	1198	.22	.33	.35
						---	---												
													.500					
1	3000	351	.9	238	1.3			0	1.84	.08	1		1.33	.203	.677	887	.29	.41	.26
						---	---												
													.500					

+	2	3400	130	.7	76	1.1			0	2.09	.08	1		1.33	.653	.585	1287	.21	.33	.38
+							---	---												
													.500							
+	3	1000	270	1.5	268	1.6			0	1.86	.08	1		1.33	.024	.995	316	.64	.08	.09
+							367	1.2												
													.500							
+	4	2300	521	.6	425	1.2			0	1.94	.08	1		1.33	.071	.817	617	.39	.58	.18
+							---	---												
1																				

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

			HYDROGRAPH INFORMATION							ROUTING PARAMETERS										PEAK
							OUTFLOW+			VOLUME	MAIN	ITER-	Q AND A			PEAK	S/Q	ATT-	TRAVEL TIME	
+	XSEC	REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION		LENGTH	RATIO	*PEAK	KIN	STOR-	KINE-
+	ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	FLOW (CFS)	BASE (IN)	INCR (HR)	#	COEFF (X)	POWER (M)	FACTOR (K*)	O/I (Q*)	(K) (SEC)	COEFF (C)	AGE (HR)	MATIC (HR)
		ALTERNATE 2 STORM 1																		
													.500							
+	7	1500	662	.7	596	.8			0	2.01	.08	1		1.33	.039	.900	379	.57	.17	.11
+							---	---												
													.500							
+	6	2700	131	1.2	123	1.7			0	2.15	.08	1		1.33	.057	.939	1020	.26	.50	.29
+							---	---												
													.500							
+	8	800	1009	.8	1004	.9			0	2.11	.08	1		1.33	.013	.995	182	.90?	.08	.05
+							1202	.9												
													.500							
+	9	1100	1202	.9	1182	1.0			0	2.13	.08	1		1.33	.021	.983	240	.77?	.08	.07
+							1375	1.0												
													.500							
+	0	2200	389	.7	288	.8			0	2.52	.08	1		1.33	.299	.741	634	.38	.17	.18
+							507	.7												
													.500							
+	21	3200	507	.7	381	1.0			0	2.52	.08	1		1.33	.307	.752	864	.29	.25	.25
+							---	---												
													.500							
+	22	4000	660	.8	528	1.2			0	2.62	.08	1		1.33	.263	.800	1012	.26	.33	.29
+							---	---												
		ALTERNATE 2 STORM 2																		
													.500							
+	0	3300	65	.7	40	1.2			0	.99	.08	1		1.33	.436	.613	1481	.18	.41	.44
+							---	---												
													.500							
+	1	3000	79	1.8	69	2.2			0	.99	.08	1		1.33	.103	.869	1285	.21	.41	.36
+							---	---												
													.500							
+	2	3400	63	.6	32	1.1			0	1.20	.08	1		1.33	.669	.507	1538	.18	.33	.46
+							---	---												
													.500							
+	3	1000	95	.7	89	2.2			0	1.01	.08	1		1.33	.019	.936	409	.54	1.41	.11
+							150	.9												
													.500							
+	4	2300	253	.5	179	1.2			0	1.07	.08	1		1.33	.076	.709	738	.34	.66	.21
+							---	---												
													.500							
+	7	1500	320	.6	267	.7			0	1.13	.08	1		1.33	.040	.833	454	.50	.17	.13
+							---	---												
													.500							
+	6	2700	71	1.7	69	2.1			0	1.25	.08	1		1.33	.064	.977	1188	.22	.33	.33
+							---	---												
													.500							

+	8	800	482	.7	476	.8			0	1.21	.08	1		1.33	.013	.988	219	.817	.08	.06
+							575	.8												
													.500							
+	9	1100	575	.8	557	.9			0	1.23	.08	1		1.33	.021	.968	288	.687	.08	.08
+							647	.9												
													.500							
+	0	2200	218	.6	148	.8			0	1.56	.08	1		1.33	.319	.677	732	.34	.17	.21
+							231	.7												
													.500							
+	21	3200	231	.7	175	1.1			0	1.56	.08	1		1.33	.265	.758	1051	.25	.25	.30
+							---	---												
													.500							
+	22	4000	288	.7	237	1.3			0	1.65	.08	1		1.33	.212	.823	1243	.21	.66	.35
+							---	---												

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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.......... 1	2
0 STRUCTURE 99	.69		
ALTERNATE 1		511.47	271.16
ALTERNATE 2		526.56	254.09
0 STRUCTURE 21	.40		
ALTERNATE 1		641.70	470.42
ALTERNATE 2		659.66	288.29
0 STRUCTURE 20	.24		
ALTERNATE 1		494.15	330.39
ALTERNATE 2		507.27	230.62
0 STRUCTURE 5	.27		
ALTERNATE 1		99.97	54.04
ALTERNATE 2		116.32	62.71
0 STRUCTURE 4	.69		
ALTERNATE 1		511.47	271.16
ALTERNATE 2		526.56	254.09
0 STRUCTURE 3	.44		
ALTERNATE 1		197.45	102.33
ALTERNATE 2		269.88	95.04
0 STRUCTURE 2	.06		
ALTERNATE 1		125.96	69.95
ALTERNATE 2		132.93	64.70
0 STRUCTURE 1	.32		
ALTERNATE 1		261.61	33.67
ALTERNATE 2		359.57	79.08
0 XSECTION 1	.12		
ALTERNATE 1		176.93	91.61
ALTERNATE 2		191.67	84.70
0 XSECTION 2	.09		
ALTERNATE 1		206.98	116.82
ALTERNATE 2		230.66	113.65
0 XSECTION 3	.10		

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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID		DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2
0 XSECTION	3	.10		
ALTERNATE	1		239.32	136.48
ALTERNATE	2		284.34	143.93
0 XSECTION	4	.07		
ALTERNATE	1		161.61	93.90
ALTERNATE	2		179.52	92.07
0 XSECTION	5	.82		
ALTERNATE	1		693.65	328.65
ALTERNATE	2		667.88	319.97
0 XSECTION	6	.16		
ALTERNATE	1		375.29	233.11
ALTERNATE	2		361.95	197.24
0 XSECTION	7	1.29		
ALTERNATE	1		1071.59	549.63
ALTERNATE	2		1009.48	485.01
0 XSECTION	8	1.40		
ALTERNATE	1		1259.86	655.32
ALTERNATE	2		1206.00	579.76
0 XSECTION	9	1.55		
ALTERNATE	1		1397.35	722.00
ALTERNATE	2		1376.99	646.87
0 XSECTION	21	.08		
ALTERNATE	1		213.36	142.93
ALTERNATE	2		191.55	113.36
0 XSECTION	22	.13		
ALTERNATE	1		430.97	295.20
ALTERNATE	2		504.79	325.29
0 XSECTION	23	.52		
ALTERNATE	1		631.99	370.46
ALTERNATE	2		619.42	339.72
0 XSECTION	24	.08		
ALTERNATE	1		250.22	168.85
ALTERNATE	2		234.24	142.85

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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID		DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1	2
0 XSECTION	40	.22		
ALTERNATE	1		516.27	324.65
ALTERNATE	2		470.03	259.22
0 XSECTION	41	.20		
ALTERNATE	1		383.13	231.31
ALTERNATE	2		360.05	190.42
0 XSECTION	42	.14		
ALTERNATE	1		347.36	231.32
ALTERNATE	2		297.40	174.68
0 XSECTION	43	.04		
ALTERNATE	1		107.50	69.60
ALTERNATE	2		113.30	64.74

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0 XSECTION   44          .10
+_____________________________
    ALTERNATE    1              139.43     69.48
    ALTERNATE    2              153.57     65.36
0 XSECTION   45          .19
+_____________________________
    ALTERNATE    1              157.54     68.85
    ALTERNATE    2              188.63     75.39
0 XSECTION   46          .10
+_____________________________
    ALTERNATE    1              210.24    117.88
    ALTERNATE    2              223.41    110.85
0 XSECTION   50         2.07
+_____________________________
    ALTERNATE    1             1916.71   1062.12
    ALTERNATE    2             1967.53    899.43
0 XSECTION   61          .31
+_____________________________
    ALTERNATE    1              135.82     77.77
    ALTERNATE    2              130.76     70.90
1END OF  1 JOBS IN THIS RUN
```