1 of 2

WINDMILL GULCH

Drainage Basin Planning Study
Technical Addendum
Volume I- Hydrology

RETURN WITHIN 2 WEEKS TO:
CITY OF COLORADO SPRINGS
STORM WATER & SUBDIVISION
101 W. COSTILLA, SUITE 113
COLORADO SPRINGS, CO 80903
(719) 578-6212

prepared for

El Paso County
Department of Public Works

February 1992
WCEA #89820

RETURN WITHIN 2 WEEKS TO:
CITY OF COLORADO SPRINGS
STORM WATER & SUBDIVISION
101 W. COSTILLA, SUITE 113
COLORADO SPRINGS, CO 80903
(719) 385-5979

RETURN WITHIN 2 WEEKS TO:
CITY OF COLORADO SPRINGS
SUBDIVISION ENGINEERING
30 SOUTH NEVADA AVE., SUITE 702
COLORADO SPRINGS, CO 80903
(719) 385-5979

WILSON
&COMPANY

455 E. Pikes Avenue, Suite 200
Colorado Springs, Colorado 80903-3675
(719) 520-5800

WINDMILL GULCH
DRAINAGE BASIN PLANNING STUDY
TECHNICAL ADDENDUM

TABLE OF CONTENTS

VOLUME I - HYDROLOGY

A. TR-20 Flow Diagrams

B. Curve Number Tables

C. Summary of Discharges Tables

D. TR-20 Analysis
2-Hour, 10-Year Existing Condition
2-Hour, 100-Year Existing Condition

E. TR-20 Analysis
24-Hour, 10-Year Existing Condition
24-Hour, 100-Year Existing Condition

F. TR-20 Analysis
2-Hour, 10-Year Future Condition
2-Hour, 100-Year Future Condition

G. TR-20 Analysis
24-Hour, 10-Year Future Condition
24-Hour, 100-Year Future Condition

H. Basin Discharge Map

VOLUME II - HYDRAULICS

A. HEC-2 Analysis
Main Channel - Existing Condition
2-Hour, 10-Year and 2-Hour, 100-Year

B. HEC-2 Analysis
Aspen Drive Overflow - Existing Condition
2-Hour, 100-Year

C. HEC-2 Analysis
Hackberry Drive Overflow - Existing Condition
2-Hour, 100-Year

D. HEC-2 Analysis
Grand Boulevard Overflow - Existing Condition
2-Hour, 100-Year

E. HEC-2 Analysis
Dix Circle Overflow - Existing Condition
2-Hour, 100-Year

RECEIVED

OCT 19 1992

City Engineering/Stormwater

WINDMILL GULCH
TABLE OF CONTENTS
PAGE TWO

F. HEC-2 Analysis
Main Channel - Floodway
2-Hour, 100-Year

G. HEC-2 Analysis
Aspen Drive Overflow - Floodway
2-Hour, 100-Year

H. HEC-2 Analysis
Hackberry Drive Overflow - Floodway
2-Hour, 100-Year

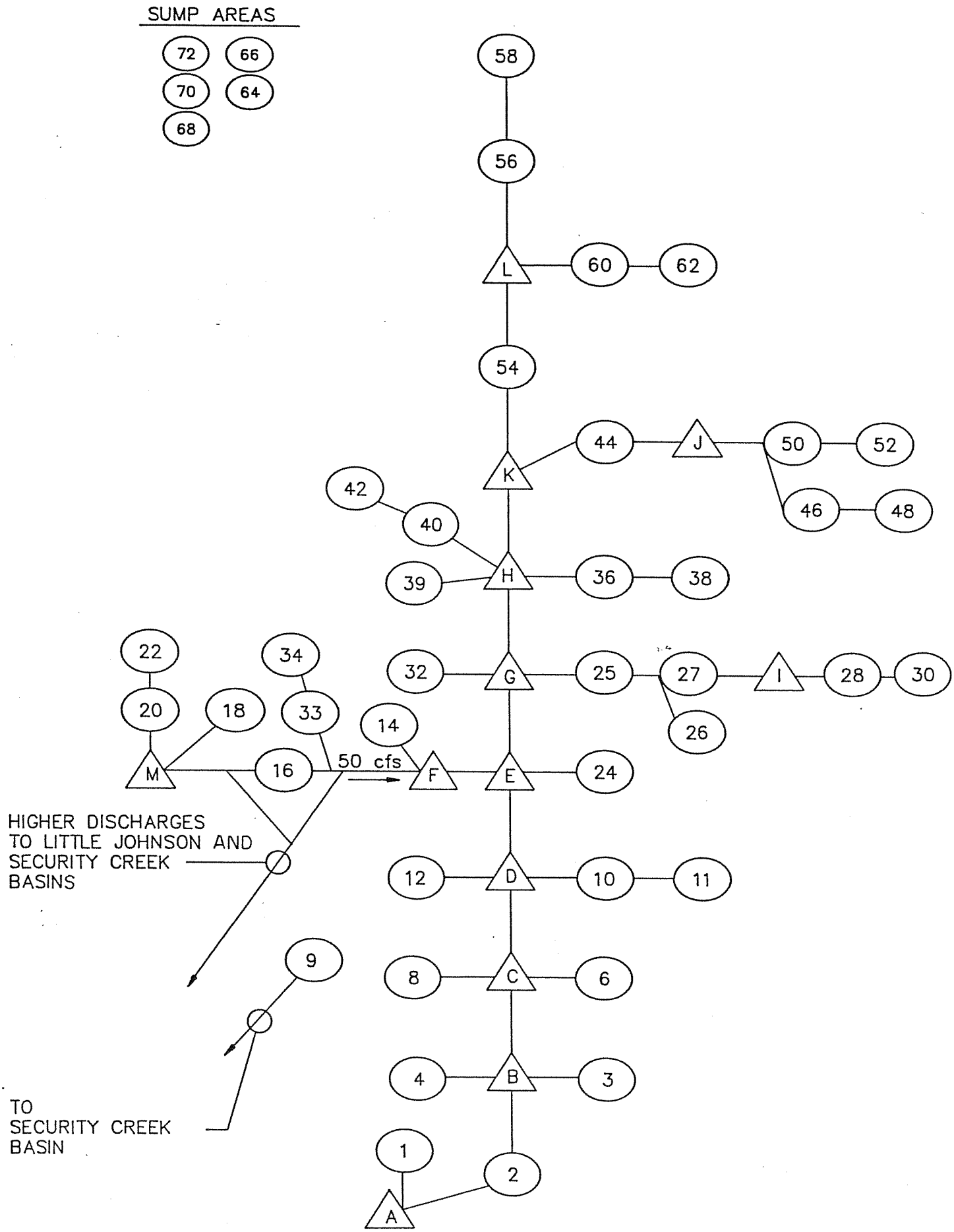
I. HEC-2 Analysis
Grand Boulevard Overflow - Floodway
2-Hour, 100-Year

J. HEC-2 Analysis
Dix Circle Overflow - Floodway
2-Hour, 100-Year

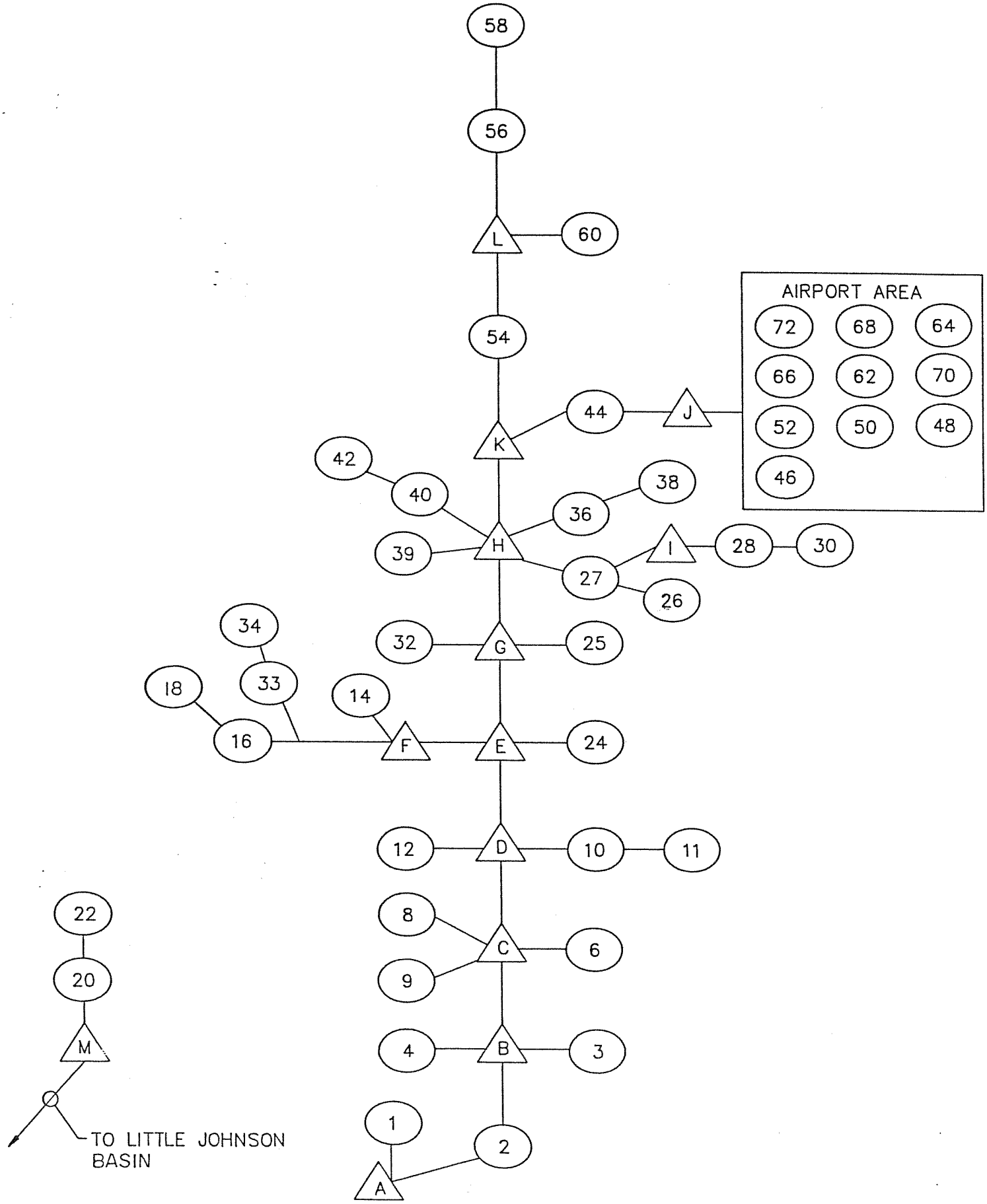
K. HEC-2 Analysis
Main Channel - Future Condition
24-Hour, 10-Year and 24-Hour, 100-Year

L. Floodplain Maps

A. TR-20 FLOW DIAGRAMS



TR-20 FLOW DIAGRAM
EXISTING CONDITIONS



TR-20 FLOW DIAGRAM
FUTURE CONDITIONS

B. CURVE NUMBER TABLES

CURVE NUMBER (CN) EXISTING CONDITIONS

Basin No.	Basin Area (Ac)	Basin Area (SqMi)	Basin Soil A (Ac)	Basin Soil B (Ac)	1-2 DU/Ac CN=70 (Ac)	3-4 DU/Ac CN=75 (Ac)	4-5 DU/Ac CN=78 (Ac)	>6 DU/Ac CN=85 (Ac)	Multi-Family CN=87 (Ac)	Industrial CN=88 (Ac)	Commercial CN=92 (Ac)	Airport CN=90 (Ac)	School CN=83 (Ac)	Open Space CN=60/74 (Ac)	Basin CN Ave
1	27.60	0.0431		27.60			27.60								78.00
2	98.88	0.1545		98.88			98.88								78.00
3	54.09	0.0845		54.09			54.09								78.00
4	53.68	0.0839		53.68			29.61						24.07		80.24
6	54.03	0.0844		54.03			48.53							5.50	77.59
8	53.85	0.0841		53.85			37.05						8.90	7.90	78.24
10	55.21	0.0863		55.21					33.69		21.52				88.95
11	20.64	0.0323		20.64							20.64				92.00
12	65.26	0.1020		65.26				29.42	35.84						86.10
14	43.41	0.0678	28.90	14.51										43.41	64.68
16	41.40	0.0647		41.40										41.40	74.00
18	69.75	0.1090		69.75		63.55					6.20				76.51
20	28.84	0.0451		28.84		12.90			11.40		4.54				82.42
22	92.83	0.1450		92.83						29.63				63.20	78.47
24	91.39	0.1428	26.25	65.14										91.39	69.98
25	32.02	0.0500	32.02											32.02	60.00
26	69.85	0.1091	5.28	64.57										69.85	72.94
27	22.42	0.0350	22.42											22.42	60.00
28	68.90	0.1077	11.58	57.32										68.90	71.65
30	88.63	0.1385	20.90	67.73										88.63	70.70
32	52.90	0.0827	26.50	26.40									7.42	45.48	69.25
33	51.95	0.0812		51.95				20.66						31.29	78.37
34	40.70	0.0636		40.70		40.70									75.00
36	63.34	0.0990	63.34											63.34	60.00
38	56.56	0.0884	56.00	0.56										56.56	60.14
39	27.40	0.0428	27.40										15.25	9.45	74.20
40	90.38	0.1412	11.96	78.42	3.11	77.18								10.09	74.51
42	53.98	0.0843	20.23	33.75	29.60									24.38	69.44
44	13.53	0.0211	13.53											13.53	60.00
46	58.77	0.0918	44.56	14.21										58.77	63.39
48	54.32	0.0849	18.65	35.67										54.32	69.19
50	132.71	0.2074	121.25	11.46										132.71	61.21
52	48.37	0.0756	47.70	0.67										48.37	60.19
54	74.77	0.1168	51.57	23.20	30.55	4.61								39.61	67.31
56	94.58	0.1478	82.38	12.20										94.58	61.81
58	40.40	0.0631	40.40											40.40	60.00
60	53.42	0.0835	53.42											53.42	60.00
62	145.68	0.2276	145.68											145.68	60.00
64	119.67	0.1870	119.67											119.67	60.00
66	47.13	0.0736	47.13											47.13	60.00
68	174.89	0.2733	174.89											174.89	60.00
70	100.99	0.1578	87.46	13.53										100.99	61.88
72	628.43	0.9819	417.98	210.45										628.43	64.69

CURVE NUMBER (CN) FUTURE CONDITIONS

Basin No.	Basin Area (Ac)	Basin Area (SqMi)	Basin Soil A (Ac)	Basin Soil B (Ac)	1-2 DU/Ac CN=70 (Ac)	3-4 DU/Ac CN=75 (Ac)	4-5 DU/Ac CN=78 (Ac)	>6 DU/Ac CN=85 (Ac)	Multi-Family CN=87 (Ac)	Industrial CN=88 (Ac)	Commercial CN=92 (Ac)	Airport CN=90 (Ac)	School CN=83 (Ac)	Open Space CN=60/74 (Ac)	Basin CN Ave
1	27.60	0.0431		27.60			27.60								78.00
2	98.88	0.1545		98.88			98.88								78.00
3	54.09	0.0845		54.09			54.09								78.00
4	53.68	0.0839		53.68			29.61						24.07		80.24
6	54.03	0.0844		54.03			48.53							5.50	77.59
8	53.85	0.0841		53.85			37.05						8.90	7.90	78.24
9	33.29	0.0520		33.29			16.07	17.22							81.62
10	55.21	0.0863		55.21					33.69		21.52				88.95
11	20.64	0.0323		20.64							20.64				92.00
12	65.26	0.1020		65.26				29.42	35.84						86.10
14	43.41	0.0678	7.46	35.95				35.95						7.46	82.70
16	41.40	0.0647		41.40					17.02		24.38				89.94
18	62.45	0.0976		62.45		59.48					2.97				75.81
20	34.14	0.0533		34.14		14.97			11.40		7.77				82.88
22	92.83	0.1450		92.83		8.86				83.97					86.76
24	91.39	0.1428	14.23	77.16							77.16			14.23	88.86
25	32.02	0.0500	5.92	26.10							26.10			5.92	88.19
26	69.85	0.1091		69.85							69.85				92.00
27	22.42	0.0350		22.42							22.42				92.00
28	68.90	0.1077		68.90								68.90			90.00
30	88.63	0.1385		88.63								88.63			90.00
32	52.90	0.0827	5.39	47.51				40.09					7.42	5.39	83.45
33	51.95	0.0812		51.95				51.95							85.00
34	42.70	0.0667		42.70		42.70									75.00
36	63.34	0.0990	11.53	51.81							51.81			11.53	89.26
38	56.56	0.0884		56.56								56.56			90.00
39	27.40	0.0428	6.84	20.56				5.31					15.25	6.84	80.27
40	90.38	0.1412	10.09	80.29	3.11	77.18								10.09	74.54
42	53.98	0.0843		53.98	29.60					24.38					78.13
44	13.53	0.0211	0.43	13.10							13.10			0.43	91.41
46	58.77	0.0918		58.77								58.77			90.00
48	54.32	0.0849		54.32								54.32			90.00
50	132.71	0.2074		132.71								132.71			90.00
52	48.37	0.0756		48.37								48.37			90.00
54	74.77	0.1168	9.72	65.05	30.55	4.61					29.89			9.72	79.39
56	94.58	0.1478		94.58						94.58					88.00
58	40.40	0.0631		40.40						40.40					88.00
60	53.42	0.0835		53.42						53.42					88.00
62	145.68	0.2276		145.68								145.68			90.00
64	119.67	0.1870		119.67								119.67			90.00
66	47.13	0.0736		47.13								47.13			90.00
68	174.89	0.2733		174.89								174.89			90.00
70	100.99	0.1578		100.99								100.99			90.00
72	628.43	0.9819		628.43								628.43			90.00

C. SUMMARY OF DISCHARGES TABLES

SUMMARY OF DISCHARGES - SUBBASIN

Subbasin No.	Existing Conditions Peak Flows (CFS) 24-Hour 100-Yr	24-Hour 10-Yr	2-Hour 100-Yr	2-Hour 10-Yr	Future Conditions Peak Flows (CFS) 24-Hour 100-Yr	24-Hour 10-Yr	2-Hour 100-Yr	2-Hour 10-Yr
1	85	40	95	50	85	40	95	50
2	300	145	325	180	300	145	325	180
3	170	80	190	100	170	80	190	100
4	180	90	190	110	180	90	190	110
6	160	80	175	95	160	80	175	95
8	160	80	175	95	160	80	175	95
9	---	---	---	---	115	60	125	70
10	260	155	285	190	260	155	285	190
11	105	65	110	75	105	65	110	75
12	250	140	255	160	250	140	255	160
14	40	10	60	25	150	80	155	90
16	65	30	75	35	190	110	200	130
18	175	80	185	95	155	70	165	85
20	95	50	95	55	---	---	---	---
22	175	80	190	95	---	---	---	---
24	135	50	160	75	405	235	430	275
25	30	5	45	15	150	85	165	110
26	120	50	135	65	340	205	350	235
27	25	5	30	10	110	65	115	75
28	110	45	130	60	315	185	325	210
30	115	45	145	65	390	230	385	250
32	85	30	105	45	175	90	175	100
33	160	80	175	95	205	110	225	130
34	105	45	115	60	110	50	120	65
36	40	10	65	25	220	125	210	125
38	40	10	65	25	275	165	295	200
39	70	30	80	40	100	50	120	70
40	175	75	195	95	195	85	215	105
42	65	25	85	40	165	80	180	100
44	15	5	20	10	70	40	70	50
46	65	20	85	35	---	---	---	---
48	65	25	85	40	---	---	---	---
50	105	25	165	60	---	---	---	---
52	30	5	50	20	---	---	---	---
54	90	30	115	50	240	120	255	145
56	85	20	125	45	415	240	450	285
58	25	5	45	15	175	100	185	115
60	40	10	65	25	220	125	225	140
62	90	20	155	60	---	---	---	---

SUMMARY OF DISCHARGES-DESIGN POINTS

Design Point	Existing Conditions Peak Flows (CFS) 24-Hour 100-Yr	24-Hour 10-Yr	2-Hour 100-Yr	2-Hour 10-Yr	Future Conditions Peak Flows (CFS) 24-Hour 100-Yr	24-Hour 10-Yr	2-Hour 100-Yr	2-Hour 10-Yr
A	1160	545	1230	750	1305	635	1240	750
B	835	365	1190	705	935	535	1020	705
C	1145	535	1405	790	1600	840	1535	870
D	925	405	1365	745	1165	675	1140	700
E	935	300	1535	695	1220	610	1180	660
F	80	50	100	65	435	195	475	245
G	830	230	1375	590	570	365	555	410
H	615	140	1045	420	1540	770	1425	745
I	205	75	255	115	705	395	720	415
J	230	60	345	135	150	110	130	110
K	515	115	825	310	495	285	445	295
L	230	50	370	135	780	440	770	475
M	370	165	375	190	---	---	---	---

Structure Number	Existing Conditions Peak Flows (CFS) 24-Hour 100-Yr	24-Hour 10-Yr	2-Hour 100-Yr	2-Hour 10-Yr	Future Conditions Peak Flows (CFS) 24-Hour 100-Yr	24-Hour 10-Yr	2-Hour 100-Yr	2-Hour 10-Yr
1	835	365	1190	705	935	535	1020	705
2	835	365	1190	705	935	535	1020	705
3	815	330	1170	675	885	525	980	670
4	815	330	1170	675	885	525	980	670
5	890	300	1315	685	915	530	985	615
6	225	45	375	135	240	165	230	165
7	150	65	195	95	250	155	230	150
8	20	5	35	15	150	90	160	110
9	5	---	10	5	40	25	45	30
10	15	5	20	5	85	50	90	60
11	230	60	345	135	150	110	130	110
12	50	50	50	50	435	195	475	245
13	50	50	50	50	485	250	490	270
14	50	50	50	50	205	115	210	130

NOTE: Future condition flows incorporate detention facilities as depicted on the preliminary design drawings.

D. TR-20 ANALYSIS

2-Hour, 10-Year Existing Condition
2-Hour, 100-Year Existing Condition

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

JOB TR-20                                          SUMMARY   NOPLOTS
TITLE 001  WINDMILL GULCH  TR20 RUN  2 HR. 10 YR. STORM
TITLE      EXISTING CONDITIONS W/ AMC III      WG2EX2
 5 RAINFL 8                0.0833
 8              0.0000     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              0.9412     0.9576     0.9741     0.9888     1.0000
 9 ENDTBL
 2 XSECTN   001            1.0
 8                       5713.8        0.0        0.0
 8                       5714.8       35.0        3.93
 8                       5716.8      230.0       19.63
 8                       5718.8      580.0       39.27
 8                       5720.8     1000.0       58.90
 8                       5722.8     1160.0       74.60
 8                       5725.8     1250.0       79.00
 9 ENDTBL
 2 XSECTN   002            1.0
 8                       5720.0        0.0        0.0
 8                       5721.0       35.0        3.93
 8                       5723.0      230.0       19.63
 8                       5725.0      580.0       39.27
 8                       5728.0     1000.0       58.90
 8                       5729.0     1160.0       74.60
 8                       5732.0     1250.0       79.0
 9 ENDTBL
 2 XSECTN   004            1.0
 8                       5727.0        0.0        0.0
 8                       5727.3       10.0        2.25
 8                       5727.7       50.0        6.37
 8                       5728.0      100.0       10.16
 8                       5729.4      500.0       31.36
 8                       5730.5     1000.0       51.94
 8                       5731.9     2000.0       86.88
 9 ENDTBL
 2 XSECTN   006            1.0
 8                       5770.0        0.0        0.0
 8                       5770.7       50.0       26.0
 8                       5771.2      160.8       54.0
 8                       5772.2      526.6      116.0
 8                       5773.2     1070.1      186.0
 8                       5774.2     1788.9      264.0
 9 ENDTBL
 2 XSECTN   010            1.0
```

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

```
8                       5805.0        0.0        0.0
8                       5806.0       50.0        8.10
8                       5806.4      100.0       13.51
8                       5807.9      500.0       44.28
8                       5808.9     1000.0       75.23
9 ENDTBL
2 XSECTN   012             1.0
8                       5793.4        0.0        0.0
8                       5794.4       40.0        4.52
8                       5797.4      260.0       22.60
8                       5799.4     1010.0       56.55
8                       5802.4     1920.0       93.87
8                       5804.4     2020.0      107.45
8                       5807.4     2200.0      115.00
9 ENDTBL
2 XSECTN   014             1.0
8                       5847.8        0.0        0.0
8                       5849.9       50.0       34.41
8                       5850.8      100.0       57.00
8                       5854.2      500.0      186.35
8                       5856.4     1000.0      310.53
9 ENDTBL
2 XSECTN   016             1.0
8                       5848.9        0.0        0.0
8                       5851.0       50.0       34.41
8                       5851.9      100.0       57.00
8                       5855.3      500.0      186.35
8                       5856.5     1000.0      310.53
9 ENDTBL
2 XSECTN   020             1.0
8                       5853.0        0.0        0.0
8                       5854.0       50.0        8.7
8                       5854.5      100.0       14.59
8                       5856.0      500.0       48.00
9 ENDTBL
2 XSECTN   024             1.0
8                       5830.0        0.0        0.0
8                       5830.6       50.0       35.69
8                       5830.9      100.0       56.02
8                       5833.3     1000.0      276.50
8                       5834.7     2000.0      457.72
9 ENDTBL
2 XSECTN   025             1.0
8                       5830.0        0.0        0.0
8                       5830.5       50.0       10.81
8                       5830.7      100.0       17.15
```

```
8                       5831.7      500.0      51.93
8                       5832.5     1000.0      85.25
8                       5833.5     2000.0     140.38
9 ENDTBL
2 XSECTN   027             1.0
8                       5872.0        0.0       0.0
8                       5872.5       50.0      10.81
8                       5872.7      100.0      17.15
8                       5873.7      500.0      51.93
8                       5874.5     1000.0      85.25
8                       5875.5     2000.0     140.38
9 ENDTBL
2 XSECTN   028             1.0
8                       5924.0        0.0       0.0
8                       5924.5       50.0      12.79
8                       5924.8      100.0      20.62
8                       5925.7      500.0      64.86
8                       5926.4     1000.0     107.50
8                       5927.4     2000.0     178.86
9 ENDTBL
2 XSECTN   032             1.0
8                       5815.0        0.0       0.0
8                       5815.7       50.0      39.80
8                       5816.0      100.0      62.94
8                       5817.5      500.0     188.77
8                       5818.6     1000.0     311.58
8                       5820.1     2000.0     516.73
9 ENDTBL
2 XSECTN   033             1.0
8                       5848.0        0.0       0.0
8                       5848.4       50.0      12.04
8                       5848.6      100.0      18.61
8                       5849.5      500.0      52.69
8                       5850.2     1000.0      84.12
9 ENDTBL
2 XSECTN   036             1.0
8                       5858.0        0.0       0.0
8                       5858.3       10.0       3.09
8                       5858.6       50.0       9.41
8                       5858.8      100.0      15.54
8                       5859.8      500.0      50.93
8                       5860.5     1000.0      85.65
9 ENDTBL
2 XSECTN   039             1.0
8                       5850.8        0.0       0.0
8                       5851.1       10.0      13.62
```

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

 8                        5851.5       50.0       38.01
 8                        5853.2      500.0      180.82
 8                        5854.3     1000.0      293.74
 8                        5855.7     2000.0      483.89
 9 ENDTBL
 2 XSECTN   040             1.0
 8                        5862.4        0.0        0.0
 8                        5862.7       50.0        7.41
 8                        5862.9      100.0       11.34
 8                        5863.7      500.0       30.51
 8                        5864.4     1000.0       47.25
 9 ENDTBL
 2 XSECTN   044             1.0
 8                        5880.0        0.0        0.0
 8                        5880.2       10.0        4.16
 8                        5880.5       50.0       11.47
 8                        5880.8      100.0       17.96
 8                        5881.9      500.0       53.20
 8                        5882.8     1000.0       86.99
 9 ENDTBL
 2 XSECTN   046             1.0
 8                        5898.0        0.0        0.0
 8                        5898.5       50.0       12.12
 8                        5898.7      100.0       19.52
 8                        5899.7      500.0       60.70
 9 ENDTBL
 2 XSECTN   050             1.0
 8                        5898.0        0.0        0.0
 8                        5898.2       10.0        4.06
 8                        5898.5       50.0       11.93
 8                        5898.7      100.0       19.23
 8                        5899.7      500.0       59.99
 9 ENDTBL
 2 XSECTN   054             1.0
 8                        5880.0        0.0        0.0
 8                        5880.5       50.0       15.56
 8                        5880.7      100.0       24.65
 8                        5881.6      500.0       75.57
 9 ENDTBL
 2 XSECTN   056             1.0
 8                        5930.0        0.0        0.0
 8                        5930.2       10.0        4.32
 8                        5930.5       50.0       11.96
 8                        5930.8      100.0       19.04
 8                        5931.9      500.0       57.76
 9 ENDTBL
```

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

```
2 XSECTN   060            1.0
8                      5930.0        0.0        0.0
8                      5930.9       50.0      10.46
8                      5931.2      100.0      17.36
8                      5932.3      500.0      58.34
9 ENDTBL
3 STRUCT      01
8                      5770.0        0.0        0.0
8                      5771.0       50.0       1.24
8                      5772.0      110.0       2.48
8                      5773.0      210.0       7.05
8                      5774.0      320.0      11.62
8                      5776.0      590.0      27.55
8                      5778.0      875.0      46.69
8                      5780.0     1180.0      67.21
8                      5782.0     1500.0      89.71
8                      5783.0     1795.0     101.86
9 ENDTBL
3 STRUCT      02
8                      5815.0        0.0        0.0
8                      5817.0      180.0       0.57
8                      5819.0      440.0       2.52
8                      5821.0      840.0       6.13
8                      5823.0     1000.0      11.83
8                      5825.0     1250.0      20.35
8                      5827.0     1500.0      32.38
8                      5829.0     1600.0      49.00
8                      5830.0     2200.0      59.34
9 ENDTBL
3 STRUCT      03
8                      5930.0        0.0        0.0
8                      5931.0        6.5       0.02
8                      5932.0       21.5       0.07
8                      5933.0       36.0       0.18
8                      5934.0       51.1       0.42
8                      5935.0      314.4       0.81
8                      5936.0      741.7       1.42
8                      5937.0     1285.6       2.30
9 ENDTBL
3 STRUCT      04
8                      5924.0        0.0        0.0
8                      5925.0       24.0       0.03
8                      5926.0       33.0       0.37
8                      5927.0       84.0       1.24
8                      5928.0      126.0       2.64
8                      5929.0      192.0       4.58
```

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

8                        5930.0       252.0        7.04
8                        5931.0       318.0       10.03
8                        5932.0       378.0       13.55
9 ENDTBL
3 STRUCT      05
8                        5898.0         0.0        0.0
8                        5899.5        60.0        0.05
8                        5901.5       240.0        0.31
8                        5903.5       480.0        1.31
8                        5905.5       720.0        2.26
8                        5907.5       960.0        5.87
8                        5909.5      2000.0       10.56
9 ENDTBL
6 RUNOFF 1 062       5     0.228      60.0     0.69        1
6 REACH  3 060   5   6  1300.                               1
6 RUNOFF 1 060       7     0.084      60.0     0.57        1
6 ADDHYD 4 060   6 7 3                                      1
6 RUNOFF 1 058       6     0.063      60.0     0.64        1
6 REACH  3 056   6   5  2700.
6 RUNOFF 1 056       4     0.148      61.8     0.54        1
6 ADDHYD 4 056   4 5 6                                      1
6 ADDHYD 4 056   3 6 5                                      1
6 RESVOR 2    03 5   4  5930.0                              1
6 REACH  3 054   4   6  2380.
6 RUNOFF 1 054       7     0.117      67.3     0.58        1
6 ADDHYD 4 054   6 7 4                                      1
6 RUNOFF 1 052       7     0.076      60.2     0.69        1
6 REACH  3 050   7   6  2950.
6 RUNOFF 1 050       5     0.207      61.2     0.57        1
6 ADDHYD 4 050   5 6 2                                      1
6 RUNOFF 1 048       5     0.085      69.2     0.67        1
6 REACH  3 046   5   6  2940.
6 RUNOFF 1 046       5     0.092      63.4     0.49        1
6 ADDHYD 4 046   5 6 3                                      1
6 ADDHYD 4 050   3 2 5                                      1
6 RESVOR 2    05 5   6   5898.0                             1
6 REACH  3 044   6   7   700.
6 RUNOFF 1 044       5     0.021      60.0     0.31        1
6 ADDHYD 4 044   7 5 6                                      1
6 ADDHYD 4 054   6 4 5                                      1
6 REACH  3 039   5   3  3400.
6 RUNOFF 1 038       7     0.088      60.1     0.61        1
6 REACH  3 036   7   5  1080.
6 REACH  3 039   5   6  1050.
6 RUNOFF 1 036       4     0.099      60.0     0.74        1
6 ADDHYD 4 036   4 6 7                                      1
```

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

```
6 ADDHYD 4 039   3 7 5                                    1
6 RUNOFF 1 042       6     0.084      69.4     0.65       1
6 REACH  3 040   6   7  3120.
6 REACH  3 039   7   3  1450.
6 RUNOFF 1 040       4     0.141      74.5     0.50       1
6 ADDHYD 4 040   3 4 6                                    1
6 ADDHYD 4 039   5 6 7                                    1
6 RUNOFF 1 039       4     0.043      74.2     0.29       1
6 ADDHYD 4 039   7 4 5                                    1
6 REACH  3 032   5   6  1250.
6 RUNOFF 1 030       5     0.139      70.7     0.67       1
6 REACH  3 028   5   7  1800.
6 RUNOFF 1 028       4     0.108      71.7     0.55       1
6 ADDHYD 4 028   4 7 5                                    1
6 RESVOR 2    04 5   7   5924.0                           1
6 REACH  3 027   7   4  1400.
6 RUNOFF 1 027       7     0.035      60.0     0.36       1
6 ADDHYD 4 027   4 7 5                                    1
6 RUNOFF 1 026       4     0.109      72.9     0.55       1
6 ADDHYD 4 027   4 5 7                                    1
6 REACH  3 025   7   5  1000.0
6 RUNOFF 1 025       4     0.050      60.0     0.42       1
6 ADDHYD 4 025   5 4 7                                    1
6 ADDHYD 4 032   6 7 5                                    1
6 RUNOFF 1 032       7     0.083      69.2     0.43       1
6 ADDHYD 4 024   5 7 4                                    1
6 REACH  3 024   4   6  1250.
6 RUNOFF 1 024       7     0.143      70.0     0.55       1
6 ADDHYD 4 024   6 7 5                                    1
6 RUNOFF 1 022       6     0.145      78.4     0.68       1
6 REACH  3 020   6   4  2040.
6 RUNOFF 1 020       7     0.045      82.4     0.34       1
6 ADDHYD 4 020   7 4 6                                    1
6 RUNOFF 1 018       4     0.109      76.5     0.37       1
6 ADDHYD 4 018   4 6 7                                    1
6 REACH  3 016   7   4  3100.
6 RUNOFF 1 016       6     0.065      74.0     0.64       1
6 ADDHYD 4 016   4 6 3                                    1
6 RUNOFF 1 034       7     0.063      75.0     0.30       1
6 REACH  3 033   7   4  2700.
6 RUNOFF 1 033       6     0.081      78.4     0.24       1
6 ADDHYD 4 033   4 6 7                                    1
6 ADDHYD 4 033   3 7 4                                    1
6 DIVERT 6 033   4 3 1    50.                             1
6 REACH  3 014   3   6  2800.
6 RUNOFF 1 014       4     0.068      64.7     0.64       1
```

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

 6 ADDHYD 4 014   4 6 7                                  1
 6 ADDHYD 4 024   7 5 4                                  1
 6 RESVOR 2    02 4   6   5815.0                         1 1   1
 6 REACH  3 012   6   7  1350.
 6 RUNOFF 1 011       5     0.032      92.0     0.17     1
 6 REACH  3 010   5   4  2300.
 6 RUNOFF 1 010       5     0.086      89.0     0.17     1
 6 ADDHYD 4 012   4 5 6                                  1
 6 ADDHYD 4 012   6 7 5                                  1
 6 RUNOFF 1 012       7     0.102      86.1     0.30     1
 6 ADDHYD 4 012   7 5 6                                  1
 6 REACH  3 006   6   7  1400.
 6 RUNOFF 1 006       5     0.084      77.6     0.25     1
 6 ADDHYD 4 006   5 7 6                                  1
 6 RUNOFF 1 008       7     0.084      78.2     0.28     1
 6 ADDHYD 4 006   7 6 5                                  1
 6 RESVOR 2    01 5   7   5770.0                         1 1   1
 6 REACH  3 004   7   6  2100.
 6 RUNOFF 1 004       5     0.084      80.2     0.25     1
 6 ADDHYD 4 004   5 6 7                                  1
 6 RUNOFF 1 003       5     0.085      78.0     0.23     1
 6 ADDHYD 4 004   7 5 4                                  1
 6 REACH  3 002   4   6   500.
 6 RUNOFF 1 002       7     0.155      78.0     0.26     1
 6 ADDHYD 4 002   7 6 4                                  1
 6 REACH  3 002   4   6  1120.
 6 RUNOFF 1 001       5     0.043      78.0     0.23     1
 6 ADDHYD 4 001   6 5 7                                  1 1   1
   ENDATA
 7 INCREM 6                0.10
 7 COMPUT 7 062   001      0.0          2.22       1.0    8 3  01  01
   ENDCMP 1
   ENDJOB 2


*****************************END OF 80-80 LIST*****************************


EXECUTIVE CONTROL OPERATION INCREM     MAIN TIME INCREMENT =   .10 HOURS                                    RECORD ID


EXECUTIVE CONTROL OPERATION COMPUT     FROM XSECTION  62  TO XSECTION   1                                   RECORD ID
        STARTING TIME =   .00    RAIN DEPTH =  2.22    RAIN DURATION=  1.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 3
        ALTERNATE NO.= 1         STORM NO.= 1    MAIN TIME INCREMENT =   .10 HOURS


OPERATION RUNOFF   CROSS SECTION  62

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              1.06                          57.71                       (RUNOFF)

     ***  WARNING  REACH  60 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT  ***
```

OPERATION REACH CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.17	57.67	5930.95

OPERATION RUNOFF CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.93	23.15	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.14	79.02	5931.07

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	16.34	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.88	47.16	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	56.84	5930.54

OPERATION ADDHYD CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.12	134.51	5930.89

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.13	135.80	5934.32

*** WARNING REACH 54 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.89	50.74	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.25	172.19	5880.86

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.06	19.51	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	62.22	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.02	73.56	5898.59

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	37.71	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 46. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.82	34.96	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.08	62.27	5898.55

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.04	135.70	5898.79

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.06	135.33	5900.34

*** WARNING REACH 44 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	7.57	(RUNOFF)
1.28	5.07	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.05	140.87	5880.91

OPERATION ADDHYD CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.22	310.16	5881.17

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.96	23.40	(RUNOFF)

*** WARNING REACH 36 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.13	24.33	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.24	45.35	5858.56

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.60	330.09	5852.56

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.93	38.01	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 40. MAX.FLOW LESS THAN 2ND TABLE VALUE.

*** WARNING REACH 40 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.79	95.45	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.82	102.15	5862.90

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.51	408.87	5852.86

OPERATION RUNOFF CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	39.53	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.49	421.52	5852.90

*** WARNING REACH 32 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	66.21	(RUNOFF)

*** WARNING REACH 28 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.83	60.55	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.98	115.39	5924.83

OPERATION RESVOR STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.32	97.46	5927.32
3.10	5.18	5924.22
3.29	2.00	5924.08

*** WARNING REACH 27 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.73	11.96	(RUNOFF)
1.28	8.44	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.31	105.89	5872.71
3.10	5.18	5872.05
3.29	2.00	5872.02

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.83	64.71	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.03	151.74	5872.83
3.10	5.62	5872.06
3.29	2.16	5872.02

*** WARNING REACH 25 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.79	15.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.02	164.61	5830.86
3.10	5.64	5830.06
3.29	2.17	5830.02

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.55	564.71	5817.64

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	47.40	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.52	588.62	5832.20

*** WARNING REACH 24 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.84	73.83	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.62	627.66	5832.31

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.91	97.26	(RUNOFF)

*** WARNING REACH 20 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.63	55.90	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.98	120.62	5854.58

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	96.00	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.74	192.18	(NULL)

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.90	36.77	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.16	183.50	5852.61

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	59.57	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 33. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	97.21	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.63	124.82	5848.66

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.98	246.92	5848.93

OPERATION DIVERT CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)	
.50	50.00*	5848.40	* FIRST POINT OF FLAT PEAK
PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)	
.98	196.92	(DIVERT)	

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 14. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	24.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.48	66.14	5850.19

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.62	693.32	5832.48

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.73	686.15	5820.23

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 2.31 SQ.MI.

.00	DISCHG	.00	.00	.00	.12	3.33	23.97	86.49	189.87	270.45	367.05
1.00	DISCHG	447.39	500.97	545.69	586.09	623.60	654.97	676.32	685.53	683.69	673.98
2.00	DISCHG	659.00	639.47	614.84	583.58	544.83	500.24	452.98	400.97	351.98	307.12
3.00	DISCHG	262.46	216.77	175.65	126.30	102.84	81.05	62.99	48.69	37.28	28.46
4.00	DISCHG	21.62	16.38	12.37	9.32	7.00	5.26	3.94	2.95	2.21	1.66
5.00	DISCHG	1.24	.93	.70	.53	.40	.30	.23	.17	.13	.10
6.00	DISCHG	.07	.05	.04	.03	.02	.02	.01	.01	.01	.00

RUNOFF VOLUME ABOVE BASEFLOW = .89 WATERSHED INCHES, 1330.51 CFS-HRS, 109.95 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 12 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.50	76.40	(RUNOFF)

*** WARNING REACH 10 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.51	190.28	(RUNOFF)
1.15	39.07	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.53	237.82	5797.10

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.73	718.65	5798.62

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	157.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.71	747.43	5798.70

*** WARNING REACH 6 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.59	97.19	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.63	545.04	5772.23
1.70	768.09	5772.64

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.61	95.46	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	639.95	5772.41
1.69	789.42	5772.68

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.16	673.47	5776.59

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 2.70 SQ.MI.

.00	DISCHG	.00	.00	.12	5.05	39.10	129.37	205.00	278.63	328.54	359.93
1.00	DISCHG	392.33	426.30	461.14	496.51	531.23	563.45	592.05	614.78	634.77	651.56
2.00	DISCHG	664.51	672.18	673.02	667.29	656.45	641.36	622.43	599.84	571.89	540.17
3.00	DISCHG	506.74	471.77	435.70	398.43	361.27	326.01	282.36	241.37	205.86	177.17
4.00	DISCHG	151.94	129.89	110.73	78.18	54.85	40.24	30.06	22.46	16.78	12.54
5.00	DISCHG	9.37	7.00	5.24	3.92	2.93	2.19	1.64	1.23	.92	.69
6.00	DISCHG	.52	.39	.29	.22	.16	.12	.09	.07	.05	.04
7.00	DISCHG	.03	.02	.01	.01	.01					

RUNOFF VOLUME ABOVE BASEFLOW = .98 WATERSHED INCHES, 1711.39 CFS-HRS, 141.43 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 4 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.58	109.37	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.08	687.08	5729.81

OPERATION RUNOFF CROSS SECTION 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	101.45	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.03	703.57	5729.85

*** WARNING REACH 2 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.59	178.29	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.63	599.25	5725.14
1.99	738.28	5726.13

*** WARNING REACH 2 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.57	51.32	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	647.35	5719.12
1.98	748.08	5719.60

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 3.07 SQ.MI.

.00	DISCHG	.00	.00	.12	11.99	154.27	508.54	641.87	596.98	556.82	539.16
1.00	DISCHG	547.92	573.61	606.09	640.34	662.99	673.72	688.79	706.51	724.93	740.86
2.00	DISCHG	747.78	733.84	701.86	677.91	660.37	642.77	622.89	599.95	571.90	540.17
3.00	DISCHG	506.74	471.77	435.70	398.43	361.27	326.01	282.36	241.37	205.86	177.17
4.00	DISCHG	151.94	129.89	110.73	78.18	54.85	40.24	30.06	22.46	16.78	12.54
5.00	DISCHG	9.37	7.00	5.24	3.92	2.93	2.19	1.64	1.23	.92	.69
6.00	DISCHG	.52	.39	.29	.22	.16	.12	.09	.07	.05	.04
7.00	DISCHG	.03	.02	.01	.01	.01					

RUNOFF VOLUME ABOVE BASEFLOW = 1.02 WATERSHED INCHES, 2017.79 CFS-HRS, 166.75 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP COMPUTATIONS COMPLETED FOR PASS 1 RECORD ID

EXECUTIVE CONTROL OPERATION ENDJOB RECORD ID

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 62	RUNOFF	.23	8	3	.10	.0	2.22	2.00	.61	---	1.06	57.71	253.1
XSECTION 60	REACH	.23	8	3	.10	.0	2.22	2.00	.61	5930.95	1.17	57.67	252.9
XSECTION 60	RUNOFF	.08	8	3	.10	.0	2.22	2.00	.61	---	.93	23.15	275.5
XSECTION 60	ADDHYD	.31	8	3	.10	.0	2.22	2.00	.61	5931.07	1.14	79.02	253.3
XSECTION 58	RUNOFF	.06	8	3	.10	.0	2.22	2.00	.61	---	1.01	16.34	259.4
XSECTION 56	REACH	.06	8	3	.10	.0	2.22	2.00	.61	5930.24	1.38	15.24	241.9
XSECTION 56	RUNOFF	.15	8	3	.10	.0	2.22	2.00	.67	---	.88	47.16	318.6
XSECTION 56	ADDHYD	.21	8	3	.10	.0	2.22	2.00	.66	5930.54	.95	56.84	269.4
XSECTION 56	ADDHYD	.52	8	3	.10	.0	2.22	2.00	.63	5930.89	1.12	134.51	257.2
STRUCTURE 3	RESVOR	.52	8	3	.10	.0	2.22	2.00	.63	5934.32	1.13	135.80	259.6
XSECTION 54	REACH	.52	8	3	.10	.0	2.22	2.00	.63	5880.77	1.33	132.39	253.1
XSECTION 54	RUNOFF	.12	8	3	.10	.0	2.22	2.00	.87	---	.89	50.74	433.6
XSECTION 54	ADDHYD	.64	8	3	.10	.0	2.22	2.00	.67	5880.86	1.25	172.19	269.0
XSECTION 52	RUNOFF	.08	8	3	.10	.0	2.22	2.00	.62	---	1.06	19.51	256.7
XSECTION 50	REACH	.08	8	3	.10	.0	2.22	2.00	.62	5898.26	1.46	18.39	242.0
XSECTION 50	RUNOFF	.21	8	3	.10	.0	2.22	2.00	.65	---	.92	62.22	300.6
XSECTION 50	ADDHYD	.28	8	3	.10	.0	2.22	2.00	.64	5898.59	1.02	73.56	259.9
XSECTION 48	RUNOFF	.09	8	3	.10	.0	2.22	2.00	.93	---	.95	37.71	443.6
XSECTION 46	REACH	.09	8	3	.10	.0	2.22	2.00	.93	5898.35	1.17	34.69	408.1
XSECTION 46	RUNOFF	.09	8	3	.10	.0	2.22	2.00	.73	---	.82	34.96	380.0
XSECTION 46	ADDHYD	.18	8	3	.10	.0	2.22	2.00	.83	5898.55	1.08	62.27	351.8
XSECTION 50	ADDHYD	.46	8	3	.10	.0	2.22	2.00	.72	5898.79	1.04	135.70	295.0
STRUCTURE 5	RESVOR	.46	8	3	.10	.0	2.22	2.00	.72	5900.34	1.06	135.33	294.2
XSECTION 44	REACH	.46	8	3	.10	.0	2.22	2.00	.72	5880.90	1.06	135.33	294.2
XSECTION 44	RUNOFF	.02	8	3	.10	.0	2.22	2.00	.61	---	.69	7.57	360.2
XSECTION 44	ADDHYD	.48	8	3	.10	.0	2.22	2.00	.71	5880.91	1.05	140.87	292.9
XSECTION 54	ADDHYD	1.12	8	3	.10	.0	2.22	2.00	.69	5881.17	1.22	310.16	276.7
XSECTION 39	REACH	1.12	8	3	.10	.0	2.22	2.00	.69	5852.39	1.63	286.78	255.8
XSECTION 38	RUNOFF	.09	8	3	.10	.0	2.22	2.00	.62	---	.96	23.40	265.9
XSECTION 36	REACH	.09	8	3	.10	.0	2.22	2.00	.62	5858.40	.96	23.40	265.9
XSECTION 39	REACH	.09	8	3	.10	.0	2.22	2.00	.62	5851.21	1.36	21.46	243.9
XSECTION 36	RUNOFF	.10	8	3	.10	.0	2.22	2.00	.61	---	1.13	24.33	245.8

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 36	ADDHYD	.19	8	3	.10	.0	2.22	2.00	.61	5858.56	1.24	45.35	242.5
XSECTION 39	ADDHYD	1.31	8	3	.10	.0	2.22	2.00	.68	5852.56	1.60	330.09	252.4
XSECTION 42	RUNOFF	.08	8	3	.10	.0	2.22	2.00	.94	---	.93	38.01	452.5
XSECTION 40	REACH	.08	8	3	.10	.0	2.22	2.00	.94	5862.62	1.08	36.92	439.5
XSECTION 39	REACH	.08	8	3	.10	.0	2.22	2.00	.94	5851.32	1.39	32.29	384.4
XSECTION 40	RUNOFF	.14	8	3	.10	.0	2.22	2.00	1.12	---	.79	95.45	677.0
XSECTION 40	ADDHYD	.22	8	3	.10	.0	2.22	2.00	1.05	5862.90	.82	102.15	454.0
XSECTION 39	ADDHYD	1.53	8	3	.10	.0	2.22	2.00	.73	5852.86	1.51	408.87	266.7
XSECTION 39	RUNOFF	.04	8	3	.10	.0	2.22	2.00	1.11	---	.62	39.53	919.2
XSECTION 39	ADDHYD	1.58	8	3	.10	.0	2.22	2.00	.74	5852.90	1.49	421.52	267.5
XSECTION 32	REACH	1.58	8	3	.10	.0	2.22	2.00	.74	5817.20	1.64	418.99	265.9
XSECTION 30	RUNOFF	.14	8	3	.10	.0	2.22	2.00	.99	---	.94	66.21	476.3
XSECTION 28	REACH	.14	8	3	.10	.0	2.22	2.00	.99	5924.59	1.08	64.68	465.3
XSECTION 28	RUNOFF	.11	8	3	.10	.0	2.22	2.00	1.02	---	.83	60.55	560.6
XSECTION 28	ADDHYD	.25	8	3	.10	.0	2.22	2.00	1.00	5924.83	.98	115.39	467.1
STRUCTURE 4	RESVOR	.25	8	3	.10	.0	2.22	2.00	1.00	5927.32	1.32	97.46	394.6
XSECTION 27	REACH	.25	8	3	.10	.0	2.22	2.00	1.00	5872.69	1.32	97.46	394.6
XSECTION 27	RUNOFF	.04	8	3	.10	.0	2.22	2.00	.61	---	.73	11.96	341.7
XSECTION 27	ADDHYD	.28	8	3	.10	.0	2.22	2.00	.95	5872.71	1.31	105.89	375.5
XSECTION 26	RUNOFF	.11	8	3	.10	.0	2.22	2.00	1.06	---	.83	64.71	593.6
XSECTION 27	ADDHYD	.39	8	3	.10	.0	2.22	2.00	.98	5872.83	1.03	151.74	388.1
XSECTION 25	REACH	.39	8	3	.10	.0	2.22	2.00	.98	5830.83	1.03	151.74	388.1
XSECTION 25	RUNOFF	.05	8	3	.10	.0	2.22	2.00	.61	---	.79	15.69	313.8
XSECTION 25	ADDHYD	.44	8	3	.10	.0	2.22	2.00	.94	5830.86	1.02	164.61	373.3
XSECTION 32	ADDHYD	2.02	8	3	.10	.0	2.22	2.00	.79	5817.64	1.55	564.71	280.0
XSECTION 32	RUNOFF	.08	8	3	.10	.0	2.22	2.00	.93	---	.74	47.40	571.1
XSECTION 24	ADDHYD	2.10	8	3	.10	.0	2.22	2.00	.79	5832.20	1.52	588.62	280.3
XSECTION 24	REACH	2.10	8	3	.10	.0	2.22	2.00	.79	5832.20	1.65	586.09	279.1
XSECTION 24	RUNOFF	.14	8	3	.10	.0	2.22	2.00	.96	---	.84	73.83	516.3
XSECTION 24	ADDHYD	2.24	8	3	.10	.0	2.22	2.00	.80	5832.31	1.62	627.66	279.8
XSECTION 22	RUNOFF	.14	8	3	.10	.0	2.22	2.00	1.29	---	.91	97.26	670.8
XSECTION 20	REACH	.14	8	3	.10	.0	2.22	2.00	1.29	5854.47	1.03	96.60	666.2
XSECTION 20	RUNOFF	.05	8	3	.10	.0	2.22	2.00	1.47	---	.63	55.90	1242.3
XSECTION 20	ADDHYD	.19	8	3	.10	.0	2.22	2.00	1.33	5854.58	.98	120.62	634.9

XSECTION	18	RUNOFF	.11	8	3	.10	.0	2.22	2.00	1.21	---	.68	96.00	880.8
XSECTION	18	ADDHYD	.30	8	3	.10	.0	2.22	2.00	1.29	---	.74	192.18	642.8

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 16	REACH	.30	8	3	.10	.0	2.22	2.00	1.28	5852.36	1.22	154.44	516.5
XSECTION 16	RUNOFF	.06	8	3	.10	.0	2.22	2.00	1.10	---	.90	36.77	565.6
XSECTION 16	ADDHYD	.36	8	3	.10	.0	2.22	2.00	1.25	5852.61	1.16	183.50	504.1
XSECTION 34	RUNOFF	.06	8	3	.10	.0	2.22	2.00	1.14	---	.62	59.57	945.5
XSECTION 33	REACH	.06	8	3	.10	.0	2.22	2.00	1.14	5848.40	.78	50.19	796.7
XSECTION 33	RUNOFF	.08	8	3	.10	.0	2.22	2.00	1.29	---	.58	97.21	1200.1
XSECTION 33	ADDHYD	.14	8	3	.10	.0	2.22	2.00	1.23	5848.66	.63	124.82	866.8
XSECTION 33	ADDHYD	.51	8	3	.10	.0	2.22	2.00	1.24	5848.93	.98	246.92	486.1
XSECTION 33	DIVERT	.00	8	3	.10	.0	2.22	2.00	1.24	5848.40	.50*	50.00**********	
XSECTION 0	DIVERT	.51	8	3	.10	.0	2.22	2.00	.84	---	.98	196.92	387.6
XSECTION 14	REACH	.00	8	3	.10	.0	2.22	2.00	.84	5849.90	2.65	49.96	**********
XSECTION 14	RUNOFF	.07	8	3	.10	.0	2.22	2.00	.78	---	.95	24.51	360.5
XSECTION 14	ADDHYD	.07	8	3	.10	.0	2.22	2.00	3.81	5850.19	1.48	66.14	972.6
XSECTION 24	ADDHYD	2.31	8	3	.10	.0	2.22	2.00	.89	5832.48	1.62	693.32	300.0
STRUCTURE 2	RESVOR	2.31	8	3	.10	.0	2.22	2.00	.89	5820.23	1.73	686.15	296.9
XSECTION 12	REACH	2.31	8	3	.10	.0	2.22	2.00	.89	5798.54	1.73	686.15	296.9
XSECTION 11	RUNOFF	.03	8	3	.10	.0	2.22	2.00	1.88	---	.50	76.40	2387.5
XSECTION 10	REACH	.03	8	3	.10	.0	2.22	2.00	1.86	5806.17	.61	71.48	2233.8
XSECTION 10	RUNOFF	.09	8	3	.10	.0	2.22	2.00	1.76	---	.51	190.28	2212.6
XSECTION 12	ADDHYD	.12	8	3	.10	.0	2.22	2.00	1.78	5797.10	.53	237.82	2015.4
XSECTION 12	ADDHYD	2.43	8	3	.10	.0	2.22	2.00	.94	5798.62	1.73	718.65	295.9
XSECTION 12	RUNOFF	.10	8	3	.10	.0	2.22	2.00	1.64	---	.60	157.84	1547.4
XSECTION 12	ADDHYD	2.53	8	3	.10	.0	2.22	2.00	.96	5798.70	1.71	747.43	295.3
XSECTION 6	REACH	2.53	8	3	.10	.0	2.22	2.00	.96	5772.61	1.71	747.43	295.3
XSECTION 6	RUNOFF	.08	8	3	.10	.0	2.22	2.00	1.25	---	.59	97.19	1157.1
XSECTION 6	ADDHYD	2.62	8	3	.10	.0	2.22	2.00	.97	5772.64	1.70	768.09	293.7
XSECTION 8	RUNOFF	.08	8	3	.10	.0	2.22	2.00	1.28	---	.61	95.46	1136.5
XSECTION 6	ADDHYD	2.70	8	3	.10	.0	2.22	2.00	.98	5772.68	1.69	789.42	292.5
STRUCTURE 1	RESVOR	2.70	8	3	.10	.0	2.22	2.00	.98	5776.59	2.16	673.47	249.5
XSECTION 4	REACH	2.70	8	3	.10	.0	2.22	2.00	.98	5729.78	2.16	673.47	249.5
XSECTION 4	RUNOFF	.08	8	3	.10	.0	2.22	2.00	1.37	---	.58	109.37	1302.1
XSECTION 4	ADDHYD	2.78	8	3	.10	.0	2.22	2.00	.99	5729.81	2.08	687.08	246.9
XSECTION 3	RUNOFF	.09	8	3	.10	.0	2.22	2.00	1.27	---	.57	101.45	1193.5
XSECTION 4	ADDHYD	2.87	8	3	.10	.0	2.22	2.00	1.00	5729.85	2.03	703.57	245.3

XSECTION	2	REACH	2.87	8	3	.10	.0	2.22	2.00	1.00	5725.88	2.03	703.57	245.3
XSECTION	2	RUNOFF	.16	8	3	.10	.0	2.22	2.00	1.27	---	.59	178.29	1150.3

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	2 ADDHYD	3.02	8	3	.10	.0	2.22	2.00	1.02	5726.13	1.99	738.28	244.2
XSECTION	2 REACH	3.02	8	3	.10	.0	2.22	2.00	1.02	5726.13	1.99	738.28	244.2
XSECTION	1 RUNOFF	.04	8	3	.10	.0	2.22	2.00	1.27	---	.57	51.32	1193.5
XSECTION	1 ADDHYD	3.07	8	3	.10	.0	2.22	2.00	1.02	5719.60	1.98	748.08	244.0

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	
		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA						Q AND A EQUATION						TRAVEL TIME	
XSEC ID	REACH LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	BASE-FLOW (CFS)	VOLUME ABOVE BASE (IN)	MAIN TIME INCR (HR)	ITER-ATION #	COEFF (X)	POWER (M)	LENGTH FACTOR (K*)	PEAK RATIO Q/I (Q*)	S/Q @PEAK (K) (SEC)	ATT-KIN COEFF (C)	STOR-AGE (HR)	KINE-MATIC (HR)
ALTERNATE		1	STORM	1															
60	1300	58	1.1	58	1.2	79	1.1	0	.61	.10	1	2.01	1.37	.015	1.000	191	.97?	.10	.05
56	2700	16	1.0	15	1.4	57	1.0	0	.61	.10	1	.990	1.58	.065	.932	616	.45	.40	.17
54	2380	135	1.1	132	1.3	171	1.2	0	.63	.10	1	.818	1.50	.029	.977	358	.67?	.20	.10
50	2950	19	1.1	18	1.5	74	1.0	0	.62	.10	1	1.23	1.49	.072	.944	644	.44	.40	.18
46	2940	37	.9	35	1.2	62	1.1	0	.93	.10	1	1.33	1.45	.068	.928	537	.50	.30	.15
44	700	135	1.1	135	1.1	140	1.0	0	.72	.10	0	1.11	1.55	.002	1.000	73	1.00?	.00	.00
39	3400	310	1.2	287	1.6	---	---	0	.69	.10	1	.205	1.50	.123	.925	955	.32	.40	.27
36	1080	23	1.0	23	1.0	---	---	0	.62	.10	0	1.96	1.45	.012	1.000	178	1.00?	.00	.00
39	1050	23	1.0	21	1.4	330	1.6	0	.62	.10	1	.166	1.57	.077	.919	671	.42	.40	.19
40	3120	38	.9	37	1.1	---	---	0	.94	.10	1	1.91	1.63	.026	.974	316	.73?	.20	.09
39	1450	37	1.1	32	1.4	409	1.5	0	.94	.10	1	.166	1.57	.112	.876	785	.37	.30	.22
32	1250	421	1.5	418	1.6	---	---	0	.74	.10	1	.216	1.48	.023	.993	337	.70?	.10	.09
28	1800	66	.9	65	1.1	115	1.0	0	.99	.10	1	1.24	1.45	.029	.983	291	.76?	.20	.08
27	1400	97	1.3	97	1.3	106	1.3	0	1.00	.10	0	1.40	1.50	.008	1.000	161	1.00?	.00	.00
25	1000	151	1.0	151	1.0	165	1.0	0	.98	.10	0	1.43	1.49	.004	1.000	101	1.00?	.00	.00
24	1250	588	1.5	585	1.7	627	1.6	0	.79	.10	1	.259	1.47	.017	.995	276	.79?	.20	.08
20	2040	97	.9	96	1.0	120	1.0	0	1.29	.10	1	2.75	1.34	.027	.990	224	.89?	.10	.06
16	3100	190	.7	154	1.2	183	1.2	0	1.29	.10	1	.393	1.37	.208	.813	1090	.28	.50	.31
33	2700	59	.6	50	.8	123	.6	0	1.14	.10	1	.953	1.59	.086	.850	385	.64	.20	.11
14	2800	50	.5	50	2.7	66	1.5	0	.00	.10	1	.388	1.37	.111	.997	1403	.23	2.20	.39
12	1350	686	1.7	686	1.7	---	---	0	.89	.10	0	4.60	1.33	.003	1.000	65	1.00?	.00	.00
10	2300	76	.5	71	.6	---	---	0	1.88	.10	1	2.94	1.35	.100	.931	246	.84?	.10	.07
6	1400	747	1.7	747	1.7	768	1.7	0	.96	.10	0	.329	1.55	.006	1.000	177	1.00?	.00	.00
4	2100	673	2.2	673	2.2	687	2.1	0	.98	.10	0	3.58	1.43	.002	1.000	85	1.00?	.00	.00
2	500	703	2.0	703	2.0	738	2.0	0	1.00	.10	0	5.33	1.28	.001	1.000	25	1.00?	.00	.00
2	1120	738	2.0	738	2.0	---	---	0	1.02	.10	0	5.29	1.28	.002	1.000	56	1.00?	.00	.00

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
STRUCTURE 5	.46	
ALTERNATE 1		135.33
STRUCTURE 4	.25	
ALTERNATE 1		97.46
STRUCTURE 3	.52	
ALTERNATE 1		135.80
STRUCTURE 2	2.31	
ALTERNATE 1		686.15
STRUCTURE 1	2.70	
ALTERNATE 1		673.47
XSECTION 0	.51	
ALTERNATE 1		196.92
XSECTION 1	3.07	
ALTERNATE 1		748.08
XSECTION 2	3.02	
ALTERNATE 1		738.28
XSECTION 3	.09	
ALTERNATE 1		101.45
XSECTION 4	2.87	
ALTERNATE 1		703.57
XSECTION 6	2.70	
ALTERNATE 1		789.42
XSECTION 8	.08	
ALTERNATE 1		95.46
XSECTION 10	.09	
ALTERNATE 1		190.28
XSECTION 11	.03	
ALTERNATE 1		76.40

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
XSECTION 12	2.53	
ALTERNATE 1		747.43
XSECTION 14	.07	
ALTERNATE 1		66.14
XSECTION 16	.36	
ALTERNATE 1		183.50
XSECTION 18	.30	
ALTERNATE 1		192.18
XSECTION 20	.19	
ALTERNATE 1		120.62
XSECTION 22	.14	
ALTERNATE 1		97.26
XSECTION 24	2.31	
ALTERNATE 1		693.32
XSECTION 25	.44	
ALTERNATE 1		164.61
XSECTION 26	.11	
ALTERNATE 1		64.71
XSECTION 27	.39	
ALTERNATE 1		151.74
XSECTION 28	.25	
ALTERNATE 1		115.39
XSECTION 30	.14	
ALTERNATE 1		66.21
XSECTION 32	.08	
ALTERNATE 1		47.40
XSECTION 33	.00	
ALTERNATE 1		50.00

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
XSECTION 34	.06	
ALTERNATE 1		59.57
XSECTION 36	.19	
ALTERNATE 1		45.35
XSECTION 38	.09	
ALTERNATE 1		23.40
XSECTION 39	1.58	
ALTERNATE 1		421.52
XSECTION 40	.22	
ALTERNATE 1		102.15
XSECTION 42	.08	
ALTERNATE 1		38.01
XSECTION 44	.48	
ALTERNATE 1		140.87
XSECTION 46	.18	
ALTERNATE 1		62.27
XSECTION 48	.09	
ALTERNATE 1		37.71
XSECTION 50	.46	
ALTERNATE 1		135.70
XSECTION 52	.08	
ALTERNATE 1		19.51
XSECTION 54	1.12	
ALTERNATE 1		310.16
XSECTION 56	.52	
ALTERNATE 1		134.51
XSECTION 58	.06	
ALTERNATE 1		16.34

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
XSECTION 60	.31	
ALTERNATE 1		79.02
XSECTION 62	.23	
ALTERNATE 1		57.71

MAIN - UNEXPECTED RECORD FOUND(IGNORED) >>> <<<

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

JOB TR-20                                                SUMMARY   NOPLOTS
TITLE 001  WINDMILL GULCH  TR20 RUN  2 HR. 100 YR. STORM
TITLE      EXISTING CONDITIONS W/ AMC III       WG2EX1
 5 RAINFL 8                 0.0833
 8              0.0000      0.0087      0.0346      0.0744      0.1436
 8              0.2647      0.4810      0.6021      0.6713      0.7249
 8              0.7682      0.8028      0.8374      0.8720      0.8893
 8              0.9066      0.9170      0.9273      0.9377      0.9481
 8              0.9585      0.9689      0.9792      0.9896      1.0000
 9 ENDTBL
 2 XSECTN   001              1.0
 8                        5713.8         0.0         0.0
 8                        5714.8        35.0        3.93
 8                        5716.8       230.0       19.63
 8                        5718.8       580.0       39.27
 8                        5720.8      1000.0       58.90
 8                        5722.8      1160.0       74.60
 8                        5725.8      1250.0       79.00
 9 ENDTBL
 2 XSECTN   002              1.0
 8                        5720.0         0.0         0.0
 8                        5721.0        35.0        3.93
 8                        5723.0       230.0       19.63
 8                        5725.0       580.0       39.27
 8                        5728.0      1000.0       58.90
 8                        5729.0      1160.0       74.60
 8                        5732.0      1250.0       79.0
 9 ENDTBL
 2 XSECTN   004              1.0
 8                        5727.0         0.0         0.0
 8                        5727.3        10.0        2.25
 8                        5727.7        50.0        6.37
 8                        5728.0       100.0       10.16
 8                        5729.4       500.0       31.36
 8                        5730.5      1000.0       51.94
 8                        5731.9      2000.0       86.88
 9 ENDTBL
 2 XSECTN   006              1.0
 8                        5770.0         0.0         0.0
 8                        5770.7        50.0        26.0
 8                        5771.2       160.8        54.0
 8                        5772.2       526.6       116.0
 8                        5773.2      1070.1       186.0
 8                        5774.2      1788.9       264.0
 9 ENDTBL
 2 XSECTN   010              1.0
```

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

```
8                       5805.0        0.0        0.0
8                       5806.0       50.0        8.10
8                       5806.4      100.0       13.51
8                       5807.9      500.0       44.28
8                       5808.9     1000.0       75.23
9 ENDTBL
2 XSECTN   012             1.0
8                       5793.4        0.0        0.0
8                       5794.4       40.0        4.52
8                       5797.4      260.0       22.60
8                       5799.4     1010.0       56.55
8                       5802.4     1920.0       93.87
8                       5804.4     2020.0      107.45
8                       5807.4     2200.0      115.00
9 ENDTBL
2 XSECTN   014             1.0
8                       5847.8        0.0        0.0
8                       5849.9       50.0       34.41
8                       5850.8      100.0       57.00
8                       5854.2      500.0      186.35
8                       5856.4     1000.0      310.53
9 ENDTBL
2 XSECTN   016             1.0
8                       5848.9        0.0        0.0
8                       5851.0       50.0       34.41
8                       5851.9      100.0       57.00
8                       5855.3      500.0      186.35
8                       5856.5     1000.0      310.53
9 ENDTBL
2 XSECTN   020             1.0
8                       5853.0        0.0        0.0
8                       5854.0       50.0        8.7
8                       5854.5      100.0       14.59
8                       5856.0      500.0       48.00
9 ENDTBL
2 XSECTN   024             1.0
8                       5830.0        0.0        0.0
8                       5830.6       50.0       35.69
8                       5830.9      100.0       56.02
8                       5833.3     1000.0      276.50
8                       5834.7     2000.0      457.72
9 ENDTBL
2 XSECTN   025             1.0
8                       5830.0        0.0        0.0
8                       5830.5       50.0       10.81
8                       5830.7      100.0       17.15
```

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

```
8                       5831.7      500.0      51.93
8                       5832.5     1000.0      85.25
8                       5833.5     2000.0     140.38
9 ENDTBL
2 XSECTN   027             1.0
8                       5872.0        0.0       0.0
8                       5872.5       50.0      10.81
8                       5872.7      100.0      17.15
8                       5873.7      500.0      51.93
8                       5874.5     1000.0      85.25
8                       5875.5     2000.0     140.38
9 ENDTBL
2 XSECTN   028             1.0
8                       5924.0        0.0       0.0
8                       5924.5       50.0      12.79
8                       5924.8      100.0      20.62
8                       5925.7      500.0      64.86
8                       5926.4     1000.0     107.50
8                       5927.4     2000.0     178.86
9 ENDTBL
2 XSECTN   032             1.0
8                       5815.0        0.0       0.0
8                       5815.7       50.0      39.80
8                       5816.0      100.0      62.94
8                       5817.5      500.0     188.77
8                       5818.6     1000.0     311.58
8                       5820.1     2000.0     516.73
9 ENDTBL
2 XSECTN   033             1.0
8                       5848.0        0.0       0.0
8                       5848.4       50.0      12.04
8                       5848.6      100.0      18.61
8                       5849.5      500.0      52.69
8                       5850.2     1000.0      84.12
9 ENDTBL
2 XSECTN   036             1.0
8                       5858.0        0.0       0.0
8                       5858.3       10.0       3.09
8                       5858.6       50.0       9.41
8                       5858.8      100.0      15.54
8                       5859.8      500.0      50.93
8                       5860.5     1000.0      85.65
9 ENDTBL
2 XSECTN   039             1.0
8                       5850.8        0.0       0.0
8                       5851.1       10.0      13.62
```

```
8                       5851.5       50.0       38.01
8                       5853.2      500.0      180.82
8                       5854.3     1000.0      293.74
8                       5855.7     2000.0      483.89
9 ENDTBL
2 XSECTN   040             1.0
8                       5862.4        0.0        0.0
8                       5862.7       50.0        7.41
8                       5862.9      100.0       11.34
8                       5863.7      500.0       30.51
8                       5864.4     1000.0       47.25
9 ENDTBL
2 XSECTN   044             1.0
8                       5880.0        0.0        0.0
8                       5880.2       10.0        4.16
8                       5880.5       50.0       11.47
8                       5880.8      100.0       17.96
8                       5881.9      500.0       53.20
8                       5882.8     1000.0       86.99
9 ENDTBL
2 XSECTN   046             1.0
8                       5898.0        0.0        0.0
8                       5898.5       50.0       12.12
8                       5898.7      100.0       19.52
8                       5899.7      500.0       60.70
9 ENDTBL
2 XSECTN   050             1.0
8                       5898.0        0.0        0.0
8                       5898.2       10.0        4.06
8                       5898.5       50.0       11.93
8                       5898.7      100.0       19.23
8                       5899.7      500.0       59.99
9 ENDTBL
2 XSECTN   054             1.0
8                       5880.0        0.0        0.0
8                       5880.5       50.0       15.56
8                       5880.7      100.0       24.65
8                       5881.6      500.0       75.57
9 ENDTBL
2 XSECTN   056             1.0
8                       5930.0        0.0        0.0
8                       5930.2       10.0        4.32
8                       5930.5       50.0       11.96
8                       5930.8      100.0       19.04
8                       5931.9      500.0       57.76
9 ENDTBL
```

```
**********************80-80 LIST OF INPUT DATA (CONTINUED)*****************
2 XSECTN   060              1.0
8                        5930.0        0.0        0.0
8                        5930.9       50.0       10.46
8                        5931.2      100.0       17.36
8                        5932.3      500.0       58.34
9 ENDTBL
3 STRUCT      01
8                        5770.0        0.0        0.0
8                        5771.0       50.0        1.24
8                        5772.0      110.0        2.48
8                        5773.0      210.0        7.05
8                        5774.0      320.0       11.62
8                        5776.0      590.0       27.55
8                        5778.0      875.0       46.69
8                        5780.0     1180.0       67.21
8                        5782.0     1500.0       89.71
8                        5783.0     1795.0      101.86
9 ENDTBL
3 STRUCT      02
8                        5815.0        0.0        0.0
8                        5817.0      180.0        0.57
8                        5819.0      440.0        2.52
8                        5821.0      840.0        6.13
8                        5823.0     1000.0       11.83
8                        5825.0     1250.0       20.35
8                        5827.0     1500.0       32.38
8                        5829.0     1600.0       49.00
8                        5830.0     2200.0       59.34
9 ENDTBL
3 STRUCT      03
8                        5930.0        0.0        0.0
8                        5931.0        6.5        0.02
8                        5932.0       21.5        0.07
8                        5933.0       36.0        0.18
8                        5934.0       51.1        0.42
8                        5935.0      314.4        0.81
8                        5936.0      741.7        1.42
8                        5937.0     1285.6        2.30
9 ENDTBL
3 STRUCT      04
8                        5924.0        0.0        0.0
8                        5925.0       24.0        0.03
8                        5926.0       33.0        0.37
8                        5927.0       84.0        1.24
8                        5928.0      126.0        2.64
8                        5929.0      192.0        4.58
```

```
8                        5930.0       252.0        7.04
8                        5931.0       318.0       10.03
8                        5932.0       378.0       13.55
9 ENDTBL
3 STRUCT      05
8                        5898.0         0.0        0.0
8                        5899.5        60.0        0.05
8                        5901.5       240.0        0.31
8                        5903.5       480.0        1.31
8                        5905.5       720.0        2.26
8                        5907.5       960.0        5.87
8                        5909.5      2000.0       10.56
9 ENDTBL
6 RUNOFF 1 062       5     0.228      60.0     0.69        1
6 REACH  3 060   5   6  1300.                               1
6 RUNOFF 1 060       7     0.084      60.0     0.57        1
6 ADDHYD 4 060   6 7 3                                      1
6 RUNOFF 1 058       6     0.063      60.0     0.64        1
6 REACH  3 056   6   5  2700.
6 RUNOFF 1 056       4     0.148      61.8     0.54        1
6 ADDHYD 4 056   4 5 6                                      1
6 ADDHYD 4 056   3 6 5                                      1
6 RESVOR 2    03 5   4  5930.0                              1
6 REACH  3 054   4   6  2380.
6 RUNOFF 1 054       7     0.117      67.3     0.58        1
6 ADDHYD 4 054   6 7 4                                      1
6 RUNOFF 1 052       7     0.076      60.2     0.69        1
6 REACH  3 050   7   6  2950.
6 RUNOFF 1 050       5     0.207      61.2     0.57        1
6 ADDHYD 4 050   5 6 2                                      1
6 RUNOFF 1 048       5     0.085      69.2     0.67        1
6 REACH  3 046   5   6  2940.
6 RUNOFF 1 046       5     0.092      63.4     0.49        1
6 ADDHYD 4 046   5 6 3                                      1
6 ADDHYD 4 050   3 2 5                                      1
6 RESVOR 2    05 5   6   5898.0                             1
6 REACH  3 044   6   7   700.
6 RUNOFF 1 044       5     0.021      60.0     0.31        1
6 ADDHYD 4 044   7 5 6                                      1
6 ADDHYD 4 054   6 4 5                                      1
6 REACH  3 039   5   3  3400.
6 RUNOFF 1 038       7     0.088      60.1     0.61        1
6 REACH  3 036   7   5  1080.
6 REACH  3 039   5   6  1050.
6 RUNOFF 1 036       4     0.099      60.0     0.74        1
6 ADDHYD 4 036   4 6 7                                      1
```

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

```
6 ADDHYD 4 039   3 7 5                                    1
6 RUNOFF 1 042       6     0.084      69.4     0.65       1
6 REACH  3 040   6   7  3120.
6 REACH  3 039   7   3  1450.
6 RUNOFF 1 040       4     0.141      74.5     0.50       1
6 ADDHYD 4 040   3 4 6                                    1
6 ADDHYD 4 039   5 6 7                                    1
6 RUNOFF 1 039       4     0.043      74.2     0.29       1
6 ADDHYD 4 039   7 4 5                                    1
6 REACH  3 032   5   6  1250.
6 RUNOFF 1 030       5     0.139      70.7     0.67       1
6 REACH  3 028   5   7  1800.
6 RUNOFF 1 028       4     0.108      71.7     0.55       1
6 ADDHYD 4 028   4 7 5                                    1
6 RESVOR 2    04 5   7   5924.0                           1
6 REACH  3 027   7   4  1400.
6 RUNOFF 1 027       7     0.035      60.0     0.36       1
6 ADDHYD 4 027   4 7 5                                    1
6 RUNOFF 1 026       4     0.109      72.9     0.55       1
6 ADDHYD 4 027   4 5 7                                    1
6 REACH  3 025   7   5  1000.0
6 RUNOFF 1 025       4     0.050      60.0     0.42       1
6 ADDHYD 4 025   5 4 7                                    1
6 ADDHYD 4 032   6 7 5                                    1
6 RUNOFF 1 032       7     0.083      69.2     0.43       1
6 ADDHYD 4 024   5 7 4                                    1
6 REACH  3 024   4   6  1250.
6 RUNOFF 1 024       7     0.143      70.0     0.55       1
6 ADDHYD 4 024   6 7 5                                    1
6 RUNOFF 1 022       6     0.145      78.4     0.68       1
6 REACH  3 020   6   4  2040.
6 RUNOFF 1 020       7     0.045      82.4     0.34       1
6 ADDHYD 4 020   7 4 6                                    1
6 RUNOFF 1 018       4     0.109      76.5     0.37       1
6 ADDHYD 4 018   4 6 7                                    1
6 REACH  3 016   7   4  3100.
6 RUNOFF 1 016       6     0.065      74.0     0.64       1
6 ADDHYD 4 016   4 6 3                                    1
6 RUNOFF 1 034       7     0.063      75.0     0.30       1
6 REACH  3 033   7   4  2700.
6 RUNOFF 1 033       6     0.081      78.4     0.24       1
6 ADDHYD 4 033   4 6 7                                    1
6 ADDHYD 4 033   3 7 4                                    1
6 DIVERT 6 033   4 3 1    50.                             1
6 REACH  3 014   3   6  2800.
6 RUNOFF 1 014       4     0.068      64.7     0.64       1
```

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

 6 ADDHYD 4 014   4 6 7                                  1
 6 ADDHYD 4 024   7 5 4                                  1
 6 RESVOR 2    02 4   6   5815.0                         1 1   1
 6 REACH  3 012   6   7  1350.
 6 RUNOFF 1 011       5     0.032      92.0     0.17     1
 6 REACH  3 010   5   4  2300.
 6 RUNOFF 1 010       5     0.086      89.0     0.17     1
 6 ADDHYD 4 012   4 5 6                                  1
 6 ADDHYD 4 012   6 7 5                                  1
 6 RUNOFF 1 012       7     0.102      86.1     0.30     1
 6 ADDHYD 4 012   7 5 6                                  1
 6 REACH  3 006   6   7  1400.
 6 RUNOFF 1 006       5     0.084      77.6     0.25     1
 6 ADDHYD 4 006   5 7 6                                  1
 6 RUNOFF 1 008       7     0.084      78.2     0.28     1
 6 ADDHYD 4 006   7 6 5                                  1
 6 RESVOR 2    01 5   7   5770.0                         1 1   1
 6 REACH  3 004   7   6  2100.
 6 RUNOFF 1 004       5     0.084      80.2     0.25     1
 6 ADDHYD 4 004   5 6 7                                  1
 6 RUNOFF 1 003       5     0.085      78.0     0.23     1
 6 ADDHYD 4 004   7 5 4                                  1
 6 REACH  3 002   4   6   500.
 6 RUNOFF 1 002       7     0.155      78.0     0.26     1
 6 ADDHYD 4 002   7 6 4                                  1
 6 REACH  3 002   4   6  1120.
 6 RUNOFF 1 001       5     0.043      78.0     0.23     1
 6 ADDHYD 4 001   6 5 7                                  1 1   1
   ENDATA
 7 INCREM 6                0.10
 7 COMPUT 7 062   001      0.0          3.05       1.0    8 3  01  01
   ENDCMP 1
   ENDJOB 2

*******************************END OF 80-80 LIST*******************************


EXECUTIVE CONTROL OPERATION INCREM     MAIN TIME INCREMENT =   .10 HOURS                                    RECORD ID


EXECUTIVE CONTROL OPERATION COMPUT     FROM XSECTION  62  TO XSECTION   1                                   RECORD ID
        STARTING TIME =   .00    RAIN DEPTH =  3.05    RAIN DURATION=  1.00    RAIN TABLE NO.= 8    ANT. MOIST. COND= 3
        ALTERNATE NO.= 1         STORM NO.= 1    MAIN TIME INCREMENT =   .10 HOURS


OPERATION RUNOFF   CROSS SECTION  62

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              1.10                          155.52                       (RUNOFF)

     ***  WARNING  REACH  60 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT  ***


OPERATION REACH    CROSS SECTION  60
```

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.10	155.52	5931.35

OPERATION RUNOFF CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.99	62.90	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.07	215.56	5931.52

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.05	44.53	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.95	123.32	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.02	154.71	5930.95

OPERATION ADDHYD CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.05	370.80	5931.54

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.05	372.81	5935.14

*** WARNING REACH 54 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.96	117.38	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.15	465.94	5881.52

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.10	52.32	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.98	163.92	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.04	199.82	5898.95

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.03	84.16	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.90	86.86	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.07	149.48	5898.82

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.05	347.82	5899.32

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.12	346.25	5902.39

*** WARNING REACH 44 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.76	20.45	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.11	358.78	5881.51

OPERATION ADDHYD CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.14	823.66	5882.33

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.02	63.81	(RUNOFF)

*** WARNING REACH 36 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.14	65.01	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.18	123.93	5858.86

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.37	848.71	5853.97

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	84.82	(RUNOFF)

*** WARNING REACH 40 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.86	193.02	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.94	216.56	5863.13

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.33	1024.02	5854.33

OPERATION RUNOFF CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.71	77.95	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.32	1045.27	5854.36

*** WARNING REACH 32 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.02	144.20	(RUNOFF)

*** WARNING REACH 28 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	128.81	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.04	255.28	5925.15

OPERATION RESVOR STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.36	196.46	5929.07
3.10	4.71	5924.20
3.28	1.86	5924.08

*** WARNING REACH 27 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.81	32.48	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.31	211.68	5872.98
3.10	4.72	5872.05
3.28	1.86	5872.02

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.91	135.00	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.16	307.18	5873.22
3.09	5.21	5872.05
3.28	2.06	5872.02

*** WARNING REACH 25 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.85	42.76	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.12	338.57	5831.30
3.09	5.24	5830.05
3.28	2.06	5830.02

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.40	1333.27	5819.10

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.83	104.99	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.38	1376.68	5833.83

*** WARNING REACH 24 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.92	161.55	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.46	1449.47	5833.93

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.00	188.85	(RUNOFF)

*** WARNING REACH 20 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	97.25	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.05	235.59	5855.01

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.76	185.05	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.85	373.16	(NULL)

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.99	76.36	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.17	380.47	5854.28

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.71	114.80	(RUNOFF)

*** WARNING REACH 33 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	176.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.73	248.08	5848.93

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	516.10	5849.52

OPERATION DIVERT CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)	
.50	50.00*	5848.40	* FIRST POINT OF FLAT PEAK

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.01	466.10	(DIVERT)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 14. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.02	59.45	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.08	97.86	5850.76

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.45	1533.28	5834.05

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.77	1313.47	5825.51

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 2.31 SQ.MI.

.00	DISCHG	.00	.00	.00	.03	1.66	16.73	83.29	221.98	399.04	621.84
1.00	DISCHG	841.03	903.19	981.86	1072.85	1163.97	1242.42	1285.50	1308.72	1312.68	1297.88
2.00	DISCHG	1266.33	1210.88	1138.29	1059.82	978.63	897.76	767.48	554.12	430.10	335.29
3.00	DISCHG	270.09	212.83	154.43	106.72	82.10	61.40	45.47	33.72	24.88	18.42
4.00	DISCHG	13.62	10.09	7.47	5.53	4.10	3.04	2.26	1.69	1.26	.95
5.00	DISCHG	.72	.54	.41	.32	.24	.18	.14	.11	.08	.06
6.00	DISCHG	.05	.04	.03	.02	.02	.01	.01	.01	.00	

RUNOFF VOLUME ABOVE BASEFLOW = 1.50 WATERSHED INCHES, 2243.71 CFS-HRS, 185.42 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 12 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.59	111.20	(RUNOFF)
1.95	8.09	(RUNOFF)

*** WARNING REACH 10 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.60	285.95	(RUNOFF)
1.95	21.56	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.62	367.76	5797.69

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.77	1341.99	5800.49

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	255.41	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
1.76	1367.32	5800.58

*** WARNING REACH 6 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.67	176.81	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.75	973.54	5773.02
1.76	1386.32	5773.64

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.69	173.89	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.73	1142.28	5773.30
1.76	1405.73	5773.67

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.21	1168.15	5779.92

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 2.70 SQ.MI.

.00	DISCHG	.00	.00	.07	3.04	24.24	113.54	218.40	356.63	456.00	542.70
1.00	DISCHG	623.05	694.48	758.84	818.17	873.79	927.30	978.68	1026.73	1070.33	1108.06
2.00	DISCHG	1138.67	1159.76	1168.03	1163.19	1147.76	1123.99	1090.46	1040.80	977.33	908.52
3.00	DISCHG	838.34	769.15	701.27	635.11	570.16	504.91	445.81	392.64	345.07	296.14
4.00	DISCHG	245.46	203.76	171.42	144.07	120.97	92.93	62.84	43.62	31.58	22.88
5.00	DISCHG	16.58	12.02	8.73	6.34	4.61	3.35	2.44	1.78	1.30	.95
6.00	DISCHG	.69	.51	.37	.27	.20	.15	.11	.08	.06	.04
7.00	DISCHG	.03	.02	.02	.01	.01	.01				

RUNOFF VOLUME ABOVE BASEFLOW = 1.62 WATERSHED INCHES, 2821.93 CFS-HRS, 233.20 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 4 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.66	191.34	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.15	1177.09	5730.75

OPERATION RUNOFF CROSS SECTION 3

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(192.16) AT XSECTION 3 EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 6 %.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	192.16	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = .09 SQ.MI.

.00	DISCHG	.00	.00	.00	.52	14.51	84.81	181.24	178.08	131.91	98.58
1.00	DISCHG	76.96	66.76	55.17	40.14	29.09	22.39	20.09	19.35	19.10	19.01
2.00	DISCHG	18.99	15.19	6.64	2.24	.76	.25	.07	.01		

OPERATION ADDHYD CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
2.11	1191.21	5730.77

*** WARNING REACH 2 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.68	326.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	1053.28	5728.33
2.08	1221.01	5731.03

*** WARNING REACH 2 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 1

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.
COMPUTED PEAK(97.21) AT XSECTION 1 EXCEEDS MAX. ADJACENT HYDROGRAPH COORDINATE BY 6 %.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.65	97.21	(RUNOFF)

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = .04 SQ.MI.

.00	DISCHG	.00	.00	.00	.26	7.34	42.90	91.69	90.09	66.73	49.87
1.00	DISCHG	38.93	33.77	27.91	20.30	14.72	11.33	10.16	9.79	9.66	9.62
2.00	DISCHG	9.60	7.68	3.36	1.13	.39	.13	.04	.00		

OPERATION ADDHYD CROSS SECTION 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.72	1140.47	5722.56
1.22	1007.32	5720.89
2.07	1229.42	5725.11

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 3.07 SQ.MI.

.00	DISCHG	.00	.00	.07	5.48	83.94	451.25	967.58	1137.04	1051.30	989.43
1.00	DISCHG	970.68	991.73	1006.77	1001.19	1006.72	1028.69	1067.79	1111.50	1153.55	1190.63
2.00	DISCHG	1221.04	1227.97	1201.32	1175.45	1152.30	1125.63	1091.01	1040.95	977.34	908.52
3.00	DISCHG	838.34	769.15	701.27	635.11	570.16	504.91	445.81	392.64	345.07	296.14
4.00	DISCHG	245.46	203.76	171.42	144.07	120.97	92.93	62.84	43.62	31.58	22.88
5.00	DISCHG	16.58	12.02	8.73	6.34	4.61	3.35	2.44	1.78	1.30	.95
6.00	DISCHG	.69	.51	.37	.27	.20	.15	.11	.08	.06	.04
7.00	DISCHG	.03	.02	.02	.01	.01	.01				

RUNOFF VOLUME ABOVE BASEFLOW = 1.67 WATERSHED INCHES, 3303.46 CFS-HRS, 273.00 ACRE-FEET; BASEFLOW = .00 CFS

EXECUTIVE CONTROL OPERATION ENDCMP COMPUTATIONS COMPLETED FOR PASS 1 RECORD ID

EXECUTIVE CONTROL OPERATION ENDJOB RECORD ID

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 62	RUNOFF	.23	8	3	.10	.0	3.05	2.00	1.16	---	1.10	155.52	682.1
XSECTION 60	REACH	.23	8	3	.10	.0	3.05	2.00	1.16	5931.35	1.10	155.52	682.1
XSECTION 60	RUNOFF	.08	8	3	.10	.0	3.05	2.00	1.16	---	.99	62.90	748.8
XSECTION 60	ADDHYD	.31	8	3	.10	.0	3.05	2.00	1.16	5931.52	1.07	215.56	690.9
XSECTION 58	RUNOFF	.06	8	3	.10	.0	3.05	2.00	1.16	---	1.05	44.53	706.8
XSECTION 56	REACH	.06	8	3	.10	.0	3.05	2.00	1.16	5930.44	1.23	42.30	671.5
XSECTION 56	RUNOFF	.15	8	3	.10	.0	3.05	2.00	1.25	---	.95	123.32	833.3
XSECTION 56	ADDHYD	.21	8	3	.10	.0	3.05	2.00	1.22	5930.95	1.02	154.71	733.2
XSECTION 56	ADDHYD	.52	8	3	.10	.0	3.05	2.00	1.19	5931.54	1.05	370.80	709.0
STRUCTURE 3	RESVOR	.52	8	3	.10	.0	3.05	2.00	1.18	5935.14	1.05	372.81	712.8
XSECTION 54	REACH	.52	8	3	.10	.0	3.05	2.00	1.19	5881.29	1.20	363.74	695.5
XSECTION 54	RUNOFF	.12	8	3	.10	.0	3.05	2.00	1.51	---	.96	117.38	1003.2
XSECTION 54	ADDHYD	.64	8	3	.10	.0	3.05	2.00	1.25	5881.52	1.15	465.94	728.0
XSECTION 52	RUNOFF	.08	8	3	.10	.0	3.05	2.00	1.17	---	1.10	52.32	688.4
XSECTION 50	REACH	.08	8	3	.10	.0	3.05	2.00	1.17	5898.50	1.29	49.53	651.8
XSECTION 50	RUNOFF	.21	8	3	.10	.0	3.05	2.00	1.22	---	.98	163.92	791.9
XSECTION 50	ADDHYD	.28	8	3	.10	.0	3.05	2.00	1.21	5898.95	1.04	199.82	706.1
XSECTION 48	RUNOFF	.09	8	3	.10	.0	3.05	2.00	1.60	---	1.03	84.16	990.1
XSECTION 46	REACH	.09	8	3	.10	.0	3.05	2.00	1.60	5898.62	1.20	80.06	941.8
XSECTION 46	RUNOFF	.09	8	3	.10	.0	3.05	2.00	1.33	---	.90	86.86	944.1
XSECTION 46	ADDHYD	.18	8	3	.10	.0	3.05	2.00	1.46	5898.82	1.07	149.48	844.5
XSECTION 50	ADDHYD	.46	8	3	.10	.0	3.05	2.00	1.30	5899.32	1.05	347.82	756.1
STRUCTURE 5	RESVOR	.46	8	3	.10	.0	3.05	2.00	1.30	5902.39	1.12	346.25	752.7
XSECTION 44	REACH	.46	8	3	.10	.0	3.05	2.00	1.30	5881.48	1.12	346.25	752.7
XSECTION 44	RUNOFF	.02	8	3	.10	.0	3.05	2.00	1.16	---	.76	20.45	973.8
XSECTION 44	ADDHYD	.48	8	3	.10	.0	3.05	2.00	1.30	5881.51	1.11	358.78	745.9
XSECTION 54	ADDHYD	1.12	8	3	.10	.0	3.05	2.00	1.27	5882.33	1.14	823.66	734.8
XSECTION 39	REACH	1.12	8	3	.10	.0	3.05	2.00	1.27	5853.72	1.40	737.93	658.3
XSECTION 38	RUNOFF	.09	8	3	.10	.0	3.05	2.00	1.17	---	1.02	63.81	725.1
XSECTION 36	REACH	.09	8	3	.10	.0	3.05	2.00	1.17	5858.66	1.02	63.81	725.1
XSECTION 39	REACH	.09	8	3	.10	.0	3.05	2.00	1.17	5851.54	1.22	59.71	678.5
XSECTION 36	RUNOFF	.10	8	3	.10	.0	3.05	2.00	1.16	---	1.14	65.01	656.7

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 36	ADDHYD	.19	8	3	.10	.0	3.05	2.00	1.17	5858.86	1.18	123.93	662.7
XSECTION 39	ADDHYD	1.31	8	3	.10	.0	3.05	2.00	1.25	5853.97	1.37	848.71	648.9
XSECTION 42	RUNOFF	.08	8	3	.10	.0	3.05	2.00	1.60	---	1.01	84.82	1009.7
XSECTION 40	REACH	.08	8	3	.10	.0	3.05	2.00	1.60	5862.84	1.13	84.15	1001.8
XSECTION 39	REACH	.08	8	3	.10	.0	3.05	2.00	1.60	5851.60	1.35	76.09	905.9
XSECTION 40	RUNOFF	.14	8	3	.10	.0	3.05	2.00	1.84	---	.86	193.02	1368.9
XSECTION 40	ADDHYD	.22	8	3	.10	.0	3.05	2.00	1.75	5863.13	.94	216.56	962.5
XSECTION 39	ADDHYD	1.53	8	3	.10	.0	3.05	2.00	1.33	5854.33	1.33	1024.02	668.0
XSECTION 39	RUNOFF	.04	8	3	.10	.0	3.05	2.00	1.82	---	.71	77.95	1812.7
XSECTION 39	ADDHYD	1.58	8	3	.10	.0	3.05	2.00	1.34	5854.36	1.32	1045.27	663.2
XSECTION 32	REACH	1.58	8	3	.10	.0	3.05	2.00	1.34	5818.66	1.44	1037.37	658.2
XSECTION 30	RUNOFF	.14	8	3	.10	.0	3.05	2.00	1.66	---	1.02	144.20	1037.4
XSECTION 28	REACH	.14	8	3	.10	.0	3.05	2.00	1.66	5924.90	1.14	143.10	1029.5
XSECTION 28	RUNOFF	.11	8	3	.10	.0	3.05	2.00	1.70	---	.92	128.81	1192.7
XSECTION 28	ADDHYD	.25	8	3	.10	.0	3.05	2.00	1.68	5925.15	1.04	255.28	1033.5
STRUCTURE 4	RESVOR	.25	8	3	.10	.0	3.05	2.00	1.68	5929.07	1.36	196.46	795.4
XSECTION 27	REACH	.25	8	3	.10	.0	3.05	2.00	1.68	5872.94	1.36	196.46	795.4
XSECTION 27	RUNOFF	.04	8	3	.10	.0	3.05	2.00	1.16	---	.81	32.48	928.0
XSECTION 27	ADDHYD	.28	8	3	.10	.0	3.05	2.00	1.62	5872.98	1.31	211.68	750.7
XSECTION 26	RUNOFF	.11	8	3	.10	.0	3.05	2.00	1.76	---	.91	135.00	1238.6
XSECTION 27	ADDHYD	.39	8	3	.10	.0	3.05	2.00	1.66	5873.22	1.16	307.18	785.6
XSECTION 25	REACH	.39	8	3	.10	.0	3.05	2.00	1.66	5831.22	1.16	307.18	785.6
XSECTION 25	RUNOFF	.05	8	3	.10	.0	3.05	2.00	1.16	---	.85	42.76	855.2
XSECTION 25	ADDHYD	.44	8	3	.10	.0	3.05	2.00	1.60	5831.30	1.12	338.57	767.7
XSECTION 32	ADDHYD	2.02	8	3	.10	.0	3.05	2.00	1.40	5819.10	1.40	1333.27	661.0
XSECTION 32	RUNOFF	.08	8	3	.10	.0	3.05	2.00	1.59	---	.83	104.99	1264.9
XSECTION 24	ADDHYD	2.10	8	3	.10	.0	3.05	2.00	1.41	5833.83	1.38	1376.68	655.6
XSECTION 24	REACH	2.10	8	3	.10	.0	3.05	2.00	1.41	5833.82	1.49	1373.11	653.9
XSECTION 24	RUNOFF	.14	8	3	.10	.0	3.05	2.00	1.63	---	.92	161.55	1129.7
XSECTION 24	ADDHYD	2.24	8	3	.10	.0	3.05	2.00	1.42	5833.93	1.46	1449.47	646.2
XSECTION 22	RUNOFF	.14	8	3	.10	.0	3.05	2.00	2.04	---	1.00	188.85	1302.4
XSECTION 20	REACH	.14	8	3	.10	.0	3.05	2.00	2.04	5854.83	1.10	188.65	1301.1
XSECTION 20	RUNOFF	.05	8	3	.10	.0	3.05	2.00	2.24	---	.72	97.25	2161.1
XSECTION 20	ADDHYD	.19	8	3	.10	.0	3.05	2.00	2.09	5855.01	1.05	235.59	1240.0

XSECTION	18	RUNOFF	.11	8	3	.10	.0	3.05	2.00	1.93	---	.76	185.05	1697.7
XSECTION	18	ADDHYD	.30	8	3	.10	.0	3.05	2.00	2.03	---	.85	373.16	1248.0

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 16	REACH	.30	8	3	.10	.0	3.05	2.00	2.03	5853.74	1.22	316.19	1057.5
XSECTION 16	RUNOFF	.06	8	3	.10	.0	3.05	2.00	1.81	---	.99	76.36	1174.8
XSECTION 16	ADDHYD	.36	8	3	.10	.0	3.05	2.00	1.99	5854.28	1.17	380.47	1045.2
XSECTION 34	RUNOFF	.06	8	3	.10	.0	3.05	2.00	1.86	---	.71	114.80	1822.2
XSECTION 33	REACH	.06	8	3	.10	.0	3.05	2.00	1.86	5848.62	.84	106.91	1697.0
XSECTION 33	RUNOFF	.08	8	3	.10	.0	3.05	2.00	2.03	---	.66	176.51	2179.2
XSECTION 33	ADDHYD	.14	8	3	.10	.0	3.05	2.00	1.95	5848.93	.73	248.08	1722.8
XSECTION 33	ADDHYD	.51	8	3	.10	.0	3.05	2.00	1.98	5849.52	1.01	516.10	1015.9
XSECTION 33	DIVERT	.00	8	3	.10	.0	3.05	2.00	1.98	5848.40	.50*	50.00**********	
XSECTION 0	DIVERT	.51	8	3	.10	.0	3.05	2.00	1.59	---	1.01	466.10	917.5
XSECTION 14	REACH	.00	8	3	.10	.0	3.05	2.00	1.59	5849.90	2.65	49.95	**********
XSECTION 14	RUNOFF	.07	8	3	.10	.0	3.05	2.00	1.40	---	1.02	59.45	874.2
XSECTION 14	ADDHYD	.07	8	3	.10	.0	3.05	2.00	4.35	5850.76	1.08	97.86	1439.1
XSECTION 24	ADDHYD	2.31	8	3	.10	.0	3.05	2.00	1.51	5834.05	1.45	1533.28	663.5
STRUCTURE 2	RESVOR	2.31	8	3	.10	.0	3.05	2.00	1.50	5825.51	1.77	1313.47	568.4
XSECTION 12	REACH	2.31	8	3	.10	.0	3.05	2.00	1.50	5800.40	1.77	1313.47	568.4
XSECTION 11	RUNOFF	.03	8	3	.10	.0	3.05	2.00	2.68	---	.59	111.20	3474.9
XSECTION 10	REACH	.03	8	3	.10	.0	3.05	2.00	2.69	5806.43	.70	107.61	3362.9
XSECTION 10	RUNOFF	.09	8	3	.10	.0	3.05	2.00	2.55	---	.60	285.95	3325.0
XSECTION 12	ADDHYD	.12	8	3	.10	.0	3.05	2.00	2.59	5797.69	.62	367.76	3116.6
XSECTION 12	ADDHYD	2.43	8	3	.10	.0	3.05	2.00	1.56	5800.49	1.77	1341.99	552.5
XSECTION 12	RUNOFF	.10	8	3	.10	.0	3.05	2.00	2.44	---	.69	255.41	2504.0
XSECTION 12	ADDHYD	2.53	8	3	.10	.0	3.05	2.00	1.59	5800.58	1.76	1367.32	540.2
XSECTION 6	REACH	2.53	8	3	.10	.0	3.05	2.00	1.59	5773.61	1.76	1367.32	540.2
XSECTION 6	RUNOFF	.08	8	3	.10	.0	3.05	2.00	1.99	---	.67	176.81	2104.9
XSECTION 6	ADDHYD	2.62	8	3	.10	.0	3.05	2.00	1.61	5773.64	1.76	1386.32	530.1
XSECTION 8	RUNOFF	.08	8	3	.10	.0	3.05	2.00	2.02	---	.69	173.89	2070.1
XSECTION 6	ADDHYD	2.70	8	3	.10	.0	3.05	2.00	1.62	5773.67	1.76	1405.73	520.8
STRUCTURE 1	RESVOR	2.70	8	3	.10	.0	3.05	2.00	1.62	5779.92	2.21	1168.15	432.8
XSECTION 4	REACH	2.70	8	3	.10	.0	3.05	2.00	1.62	5730.74	2.21	1168.15	432.8
XSECTION 4	RUNOFF	.08	8	3	.10	.0	3.05	2.00	2.12	---	.66	191.34	2277.9
XSECTION 4	ADDHYD	2.78	8	3	.10	.0	3.05	2.00	1.64	5730.75	2.15	1177.09	423.0
XSECTION 3	RUNOFF	.09	8	3	.10	.0	3.05	2.00	2.00	---	.65	192.16	2260.7
XSECTION 4	ADDHYD	2.87	8	3	.10	.0	3.05	2.00	1.65	5730.77	2.11	1191.20	415.3

XSECTION	2	REACH	2.87	8	3	.10	.0	3.05	2.00	1.65	5730.04	2.11	1191.20	415.3
XSECTION	2	RUNOFF	.16	8	3	.10	.0	3.05	2.00	2.01	---	.68	326.84	2108.7

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 2	ADDHYD	3.02	8	3	.10	.0	3.05	2.00	1.66	5731.03	2.08	1221.01	403.9
XSECTION 2	REACH	3.02	8	3	.10	.0	3.05	2.00	1.66	5731.03	2.08	1221.01	403.9
XSECTION 1	RUNOFF	.04	8	3	.10	.0	3.05	2.00	2.00	---	.65	97.21	2260.7
XSECTION 1	ADDHYD	3.07	8	3	.10	.0	3.05	2.00	1.67	5725.11	2.07	1229.42	401.0

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 PE
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

		HYDROGRAPH INFORMATION							ROUTING PARAMETERS									PEA
		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA						Q AND A EQUATION						TRAVEL
XSEC ID	REACH LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	BASE-FLOW (CFS)	VOLUME ABOVE BASE (IN)	MAIN TIME INCR (HR)	ITER-ATION #	COEFF (X)	POWER (M)	LENGTH FACTOR (K*)	PEAK RATIO O/I (Q*)	S/Q @PEAK (K) (SEC)	ATT-KIN COEFF (C)	STOR-AGE (HR)
ALTERNATE	1	STORM	1															
60	1300	156	1.1	156	1.1	215	1.1	0	1.16	.10	0	2.04	1.36	.018	1.000	149	1.00?	.00
56	2700	44	1.0	42	1.2	154	1.0	0	1.16	.10	1	.990	1.58	.064	.957	428	.59	.20
54	2380	367	1.0	364	1.2	461	1.1	0	1.18	.10	1	.905	1.46	.035	.991	270	.80?	.20
50	2950	52	1.1	50	1.3	198	1.0	0	1.17	.10	1	1.24	1.49	.074	.947	465	.56	.20
46	2940	84	1.0	80	1.2	149	1.1	0	1.60	.10	1	1.33	1.45	.070	.954	417	.60	.20
44	700	346	1.1	346	1.1	359	1.1	0	1.30	.10	0	1.23	1.51	.003	1.000	55	1.00?	.00
39	3400	819	1.1	738	1.4	---	---	0	1.27	.10	1	.243	1.47	.141	.900	724	.40	.30
36	1080	64	1.0	64	1.0	---	---	0	1.17	.10	0	1.99	1.43	.014	1.000	133	1.00?	.00
39	1050	64	1.0	60	1.2	848	1.4	0	1.17	.10	1	.170	1.56	.079	.936	473	.55	.20
40	3120	85	1.0	84	1.1	---	---	0	1.60	.10	1	1.91	1.63	.024	.989	232	.87?	.10
39	1450	84	1.1	75	1.3	1022	1.3	0	1.60	.10	1	.174	1.55	.117	.899	602	.46	.20
32	1250	1044	1.3	1033	1.4	---	---	0	1.34	.10	1	.276	1.43	.028	.989	270	.80?	.10
28	1800	144	1.0	142	1.1	253	1.0	0	1.66	.10	1	1.26	1.44	.031	.988	232	.87?	.10
27	1400	196	1.4	196	1.4	212	1.3	0	1.68	.10	0	1.45	1.49	.008	1.000	131	1.00?	.00
25	1000	306	1.2	306	1.2	338	1.1	0	1.66	.10	0	1.49	1.47	.004	1.000	82	1.00?	.00
24	1250	1376	1.4	1373	1.5	1446	1.5	0	1.41	.10	1	.311	1.43	.019	.998	221	.90?	.10
20	2040	189	1.0	189	1.1	234	1.0	0	2.04	.10	1	2.73	1.34	.028	.999	188	.98?	.10
16	3100	372	.9	316	1.2	380	1.2	0	2.03	.10	1	.401	1.36	.220	.850	916	.33	.30
33	2700	114	.7	104	.8	245	.7	0	1.86	.10	1	.958	1.59	.078	.908	302	.75?	.10
14	2800	50	.5	50	2.7	98	1.1	0	.00	.10	1	.388	1.37	.114	.997	1403	.23	2.20
12	1350	1313	1.8	1313	1.8	---	---	0	1.50	.10	0	3.89	1.37	.002	1.000	52	1.00?	.00
10	2300	111	.6	108	.7	---	---	0	2.68	.10	1	2.94	1.35	.090	.969	223	.89?	.10
6	1400	1366	1.8	1366	1.8	1385	1.8	0	1.59	.10	0	.375	1.52	.006	1.000	148	1.00?	.00
4	2100	1168	2.2	1168	2.2	1176	2.2	0	1.62	.10	0	3.90	1.40	.002	1.000	75	1.00?	.00
2	500	1191	2.1	1191	2.1	1220	2.1	0	1.65	.10	0	6.29	1.21	.001	1.000	26	1.00?	.00
2	1120	1220	2.1	1220	2.1	---	---	0	1.66	.10	0	6.24	1.21	.003	1.000	59	1.00?	.00

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
STRUCTURE 5	.46	
ALTERNATE 1		346.25
STRUCTURE 4	.25	
ALTERNATE 1		196.46
STRUCTURE 3	.52	
ALTERNATE 1		372.81
STRUCTURE 2	2.31	
ALTERNATE 1		1313.47
STRUCTURE 1	2.70	
ALTERNATE 1		1168.15
XSECTION 0	.51	
ALTERNATE 1		466.10
XSECTION 1	3.07	
ALTERNATE 1		1229.42
XSECTION 2	3.02	
ALTERNATE 1		1221.01
XSECTION 3	.09	
ALTERNATE 1		192.16
XSECTION 4	2.87	
ALTERNATE 1		1191.20
XSECTION 6	2.70	
ALTERNATE 1		1405.73
XSECTION 8	.08	
ALTERNATE 1		173.89
XSECTION 10	.09	
ALTERNATE 1		285.95
XSECTION 11	.03	
ALTERNATE 1		111.20

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
XSECTION 12	2.53	
ALTERNATE 1		1367.32
XSECTION 14	.07	
ALTERNATE 1		97.86
XSECTION 16	.36	
ALTERNATE 1		380.47
XSECTION 18	.30	
ALTERNATE 1		373.16
XSECTION 20	.19	
ALTERNATE 1		235.59
XSECTION 22	.14	
ALTERNATE 1		188.85
XSECTION 24	2.31	
ALTERNATE 1		1533.28
XSECTION 25	.44	
ALTERNATE 1		338.57
XSECTION 26	.11	
ALTERNATE 1		135.00
XSECTION 27	.39	
ALTERNATE 1		307.18
XSECTION 28	.25	
ALTERNATE 1		255.28
XSECTION 30	.14	
ALTERNATE 1		144.20
XSECTION 32	.08	
ALTERNATE 1		104.99
XSECTION 33	.00	
ALTERNATE 1		50.00

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
XSECTION 34	.06	
ALTERNATE 1		114.80
XSECTION 36	.19	
ALTERNATE 1		123.93
XSECTION 38	.09	
ALTERNATE 1		63.81
XSECTION 39	1.58	
ALTERNATE 1		1045.27
XSECTION 40	.22	
ALTERNATE 1		216.56
XSECTION 42	.08	
ALTERNATE 1		84.82
XSECTION 44	.48	
ALTERNATE 1		358.78
XSECTION 46	.18	
ALTERNATE 1		149.48
XSECTION 48	.09	
ALTERNATE 1		84.16
XSECTION 50	.46	
ALTERNATE 1		347.82
XSECTION 52	.08	
ALTERNATE 1		52.32
XSECTION 54	1.12	
ALTERNATE 1		823.66
XSECTION 56	.52	
ALTERNATE 1		370.80
XSECTION 58	.06	
ALTERNATE 1		44.53

SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS..... 1
XSECTION 60	.31	
ALTERNATE 1		215.56
XSECTION 62	.23	
ALTERNATE 1		155.52

E. TR-20 ANALYSIS

24-Hour, 10-Year Existing Condition
24-Hour, 100-Year Existing Condition

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

JOB TR-20                                          SUMMARY   NOPLOTS
TITLE 001  WINDMILL GULCH  TR20 RUN  24 HR. 10 YR. STORM
TITLE      EXISTING CONDITIONS W/ AMC II       WG24EX2
 5 RAINFL 7                 0.25
 8              0.0000     0.0005     0.0015     0.0030     0.0045
 8              0.0060     0.0080     0.0100     0.0120     0.0143
 8              0.0165     0.0188     0.0210     0.0233     0.0255
 8              0.0278     0.0320     0.0390     0.0460     0.0530
 8              0.0600     0.0750     0.1000     0.4000     0.7000
 8              0.7250     0.7500     0.7650     0.7800     0.7900
 8              0.8000     0.8100     0.8200     0.8250     0.8300
 8              0.8350     0.8400     0.8450     0.8500     0.8550
 8              0.8600     0.8638     0.8675     0.8713     0.8750
 8              0.8788     0.8825     0.8863     0.8900     0.8938
 8              0.8975     0.9013     0.9050     0.9083     0.9115
 8              0.9148     0.9180     0.9210     0.9240     0.9270
 8              0.9300     0.9325     0.9350     0.9375     0.9400
 8              0.9425     0.9450     0.9475     0.9500     0.9525
 8              0.9550     0.9575     0.9600     0.9625     0.9650
 8              0.9675     0.9700     0.9725     0.9750     0.9775
 8              0.9800     0.9813     0.9825     0.9838     0.9850
 8              0.9863     0.9875     0.9888     0.9900     0.9913
 8              0.9925     0.9938     0.9950     0.9963     0.9975
 8              0.9988     1.0000     1.0000     1.0000     1.0000
 9 ENDTBL
 2 XSECTN   001              1.0
 8                        5713.8        0.0        0.0
 8                        5714.8       35.0       3.93
 8                        5716.8      230.0      19.63
 8                        5718.8      580.0      39.27
 8                        5720.8     1000.0      58.90
 8                        5722.8     1160.0      74.60
 8                        5725.8     1250.0      79.00
 9 ENDTBL
 2 XSECTN   002              1.0
 8                        5720.0        0.0        0.0
 8                        5721.0       35.0       3.93
 8                        5723.0      230.0      19.63
 8                        5725.0      580.0      39.27
 8                        5728.0     1000.0      58.90
 8                        5729.0     1160.0      74.60
 8                        5732.0     1250.0      79.0
 9 ENDTBL
 2 XSECTN   004              1.0
 8                        5727.0        0.0        0.0
 8                        5727.3       10.0       2.25
```

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

```
8                       5727.7       50.0        6.37
8                       5728.0      100.0       10.16
8                       5729.4      500.0       31.36
8                       5730.5     1000.0       51.94
8                       5731.9     2000.0       86.88
9 ENDTBL
2 XSECTN   006             1.0
8                       5770.0        0.0        0.0
8                       5770.7       50.0       26.0
8                       5771.2      160.8       54.0
8                       5772.2      526.6      116.0
8                       5773.2     1070.1      186.0
8                       5774.2     1788.9      264.0
9 ENDTBL
2 XSECTN   010             1.0
8                       5805.0        0.0        0.0
8                       5806.0       50.0        8.10
8                       5806.4      100.0       13.51
8                       5807.9      500.0       44.28
8                       5808.9     1000.0       75.23
9 ENDTBL
2 XSECTN   012             1.0
8                       5793.4        0.0        0.0
8                       5794.4       40.0        4.52
8                       5797.4      260.0       22.60
8                       5799.4     1010.0       56.55
8                       5802.4     1920.0       93.87
8                       5804.4     2020.0      107.45
8                       5807.4     2200.0      115.00
9 ENDTBL
2 XSECTN   014             1.0
8                       5847.8        0.0        0.0
8                       5849.9       50.0       34.41
8                       5850.8      100.0       57.00
8                       5854.2      500.0      186.35
8                       5856.4     1000.0      310.53
9 ENDTBL
2 XSECTN   016             1.0
8                       5848.9        0.0        0.0
8                       5851.0       50.0       34.41
8                       5851.9      100.0       57.00
8                       5855.3      500.0      186.35
8                       5856.5     1000.0      310.53
9 ENDTBL
2 XSECTN   020             1.0
8                       5853.0        0.0        0.0
```

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

```
8                       5854.0       50.0       8.7
8                       5854.5      100.0      14.59
8                       5856.0      500.0      48.00
9 ENDTBL
2 XSECTN   024            1.0
8                       5830.0        0.0       0.0
8                       5830.6       50.0      35.69
8                       5830.9      100.0      56.02
8                       5833.3     1000.0     276.50
8                       5834.7     2000.0     457.72
9 ENDTBL
2 XSECTN   025            1.0
8                       5830.0        0.0       0.0
8                       5830.5       50.0      10.81
8                       5830.7      100.0      17.15
8                       5831.7      500.0      51.93
8                       5832.5     1000.0      85.25
8                       5833.5     2000.0     140.38
9 ENDTBL
2 XSECTN   027            1.0
8                       5872.0        0.0       0.0
8                       5872.5       50.0      10.81
8                       5872.7      100.0      17.15
8                       5873.7      500.0      51.93
8                       5874.5     1000.0      85.25
8                       5875.5     2000.0     140.38
9 ENDTBL
2 XSECTN   028            1.0
8                       5924.0        0.0       0.0
8                       5924.5       50.0      12.79
8                       5924.8      100.0      20.62
8                       5925.7      500.0      64.86
8                       5926.4     1000.0     107.50
8                       5927.4     2000.0     178.86
9 ENDTBL
2 XSECTN   032            1.0
8                       5815.0        0.0       0.0
8                       5815.7       50.0      39.80
8                       5816.0      100.0      62.94
8                       5817.5      500.0     188.77
8                       5818.6     1000.0     311.58
8                       5820.1     2000.0     516.73
9 ENDTBL
2 XSECTN   033            1.0
8                       5848.0        0.0       0.0
8                       5848.4       50.0      12.04
```

```
8                    5848.6      100.0      18.61
8                    5849.5      500.0      52.69
8                    5850.2     1000.0      84.12
9 ENDTBL
2 XSECTN   036          1.0
8                    5858.0        0.0       0.0
8                    5858.3       10.0       3.09
8                    5858.6       50.0       9.41
8                    5858.8      100.0      15.54
8                    5859.8      500.0      50.93
8                    5860.5     1000.0      85.65
9 ENDTBL
2 XSECTN   039          1.0
8                    5850.8        0.0       0.0
8                    5851.1       10.0      13.62
8                    5851.5       50.0      38.01
8                    5853.2      500.0     180.82
8                    5854.3     1000.0     293.74
8                    5855.7     2000.0     483.89
9 ENDTBL
2 XSECTN   040          1.0
8                    5862.4        0.0       0.0
8                    5862.7       50.0       7.41
8                    5862.9      100.0      11.34
8                    5863.7      500.0      30.51
8                    5864.4     1000.0      47.25
9 ENDTBL
2 XSECTN   044          1.0
8                    5880.0        0.0       0.0
8                    5880.2       10.0       4.16
8                    5880.5       50.0      11.47
8                    5880.8      100.0      17.96
8                    5881.9      500.0      53.20
8                    5882.8     1000.0      86.99
9 ENDTBL
2 XSECTN   046          1.0
8                    5898.0        0.0       0.0
8                    5898.5       50.0      12.12
8                    5898.7      100.0      19.52
8                    5899.7      500.0      60.70
9 ENDTBL
2 XSECTN   050          1.0
8                    5898.0        0.0       0.0
8                    5898.2       10.0       4.06
8                    5898.5       50.0      11.93
8                    5898.7      100.0      19.23
```

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

```
8                       5899.7       500.0       59.99
9 ENDTBL
2 XSECTN   054             1.0
8                       5880.0         0.0        0.0
8                       5880.5        50.0       15.56
8                       5880.7       100.0       24.65
8                       5881.6       500.0       75.57
9 ENDTBL
2 XSECTN   056             1.0
8                       5930.0         0.0        0.0
8                       5930.2        10.0        4.32
8                       5930.5        50.0       11.96
8                       5930.8       100.0       19.04
8                       5931.9       500.0       57.76
9 ENDTBL
2 XSECTN   060             1.0
8                       5930.0         0.0        0.0
8                       5930.9        50.0       10.46
8                       5931.2       100.0       17.36
8                       5932.3       500.0       58.34
9 ENDTBL
3 STRUCT      01
8                       5770.0         0.0        0.0
8                       5771.0        50.0        1.24
8                       5772.0       110.0        2.48
8                       5773.0       210.0        7.05
8                       5774.0       320.0       11.62
8                       5776.0       590.0       27.55
8                       5778.0       875.0       46.69
8                       5780.0      1180.0       67.21
8                       5782.0      1500.0       89.71
8                       5783.0      1795.0      101.86
9 ENDTBL
3 STRUCT      02
8                       5815.0         0.0        0.0
8                       5817.0       180.0        0.57
8                       5819.0       440.0        2.52
8                       5821.0       840.0        6.13
8                       5823.0      1000.0       11.83
8                       5825.0      1250.0       20.35
8                       5827.0      1500.0       32.38
8                       5829.0      1600.0       49.00
8                       5830.0      2200.0       59.34
9 ENDTBL
3 STRUCT      03
8                       5930.0         0.0        0.0
```

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

 8                        5931.0        6.5       0.02
 8                        5932.0       21.5       0.07
 8                        5933.0       36.0       0.18
 8                        5934.0       51.1       0.42
 8                        5935.0      314.4       0.81
 8                        5936.0      741.7       1.42
 8                        5937.0     1285.6       2.30
 9 ENDTBL
 3 STRUCT      04
 8                        5924.0        0.0       0.0
 8                        5925.0       24.0       0.03
 8                        5926.0       33.0       0.37
 8                        5927.0       84.0       1.24
 8                        5928.0      126.0       2.64
 8                        5929.0      192.0       4.58
 8                        5930.0      252.0       7.04
 8                        5931.0      318.0      10.03
 8                        5932.0      378.0      13.55
 9 ENDTBL
 3 STRUCT      05
 8                        5898.0        0.0       0.0
 8                        5899.5       60.0       0.05
 8                        5901.5      240.0       0.31
 8                        5903.5      480.0       1.31
 8                        5905.5      720.0       2.26
 8                        5907.5      960.0       5.87
 8                        5909.5     2000.0      10.56
 9 ENDTBL
 6 RUNOFF 1 062       5     0.228      60.0     0.69        1
 6 REACH  3 060   5   6  1300.                               1
 6 RUNOFF 1 060       7     0.084      60.0     0.57        1
 6 ADDHYD 4 060   6 7 3                                      1
 6 RUNOFF 1 058       6     0.063      60.0     0.64        1
 6 REACH  3 056   6   5  2700.
 6 RUNOFF 1 056       4     0.148      61.8     0.54        1
 6 ADDHYD 4 056   4 5 6                                      1
 6 ADDHYD 4 056   3 6 5                                      1
 6 RESVOR 2    03 5   4  5930.0                              1
 6 REACH  3 054   4   6  2380.
 6 RUNOFF 1 054       7     0.117      67.3     0.58        1
 6 ADDHYD 4 054   6 7 4                                      1
 6 RUNOFF 1 052       7     0.076      60.2     0.69        1
 6 REACH  3 050   7   6  2950.
 6 RUNOFF 1 050       5     0.207      61.2     0.57        1
 6 ADDHYD 4 050   5 6 2                                      1
 6 RUNOFF 1 048       5     0.085      69.2     0.67        1
```

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

```
6 REACH  3 046   5   6  2940.
6 RUNOFF 1 046       5     0.092      63.4     0.49        1
6 ADDHYD 4 046   5 6 3                                      1
6 ADDHYD 4 050   3 2 5                                      1
6 RESVOR 2    05 5   6    5898.0                            1
6 REACH  3 044   6   7   700.
6 RUNOFF 1 044       5     0.021      60.0     0.31        1
6 ADDHYD 4 044   7 5 6                                      1
6 ADDHYD 4 054   6 4 5                                      1
6 REACH  3 039   5   3  3400.
6 RUNOFF 1 038       7     0.088      60.1     0.61        1
6 REACH  3 036   7   5  1080.
6 REACH  3 039   5   6  1050.
6 RUNOFF 1 036       4     0.099      60.0     0.74        1
6 ADDHYD 4 036   4 6 7                                      1
6 ADDHYD 4 039   3 7 5                                      1
6 RUNOFF 1 042       6     0.084      69.4     0.65        1
6 REACH  3 040   6   7  3120.
6 REACH  3 039   7   3  1450.
6 RUNOFF 1 040       4     0.141      74.5     0.50        1
6 ADDHYD 4 040   3 4 6                                      1
6 ADDHYD 4 039   5 6 7                                      1
6 RUNOFF 1 039       4     0.043      74.2     0.29        1
6 ADDHYD 4 039   7 4 5                                      1
6 REACH  3 032   5   6  1250.
6 RUNOFF 1 030       5     0.139      70.7     0.67        1
6 REACH  3 028   5   7  1800.
6 RUNOFF 1 028       4     0.108      71.7     0.55        1
6 ADDHYD 4 028   4 7 5                                      1
6 RESVOR 2    04 5   7   5924.0                            1
6 REACH  3 027   7   4  1400.
6 RUNOFF 1 027       7     0.035      60.0     0.36        1
6 ADDHYD 4 027   4 7 5                                      1
6 RUNOFF 1 026       4     0.109      72.9     0.55        1
6 ADDHYD 4 027   4 5 7                                      1
6 REACH  3 025   7   5  1000.0
6 RUNOFF 1 025       4     0.050      60.0     0.42        1
6 ADDHYD 4 025   5 4 7                                      1
6 ADDHYD 4 032   6 7 5                                      1
6 RUNOFF 1 032       7     0.083      69.2     0.43        1
6 ADDHYD 4 024   5 7 4                                      1
6 REACH  3 024   4   6  1250.
6 RUNOFF 1 024       7     0.143      70.0     0.55        1
6 ADDHYD 4 024   6 7 5                                      1
6 RUNOFF 1 022       6     0.145      78.4     0.68        1
6 REACH  3 020   6   4  2040.
```

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

 6 RUNOFF 1 020       7     0.045      82.4     0.34        1
 6 ADDHYD 4 020   7 4 6                                      1
 6 RUNOFF 1 018       4     0.109      76.5     0.37        1
 6 ADDHYD 4 018   4 6 7                                      1
 6 REACH  3 016   7   4  3100.
 6 RUNOFF 1 016       6     0.065      74.0     0.64        1
 6 ADDHYD 4 016   4 6 3                                      1
 6 RUNOFF 1 034       7     0.063      75.0     0.30        1
 6 REACH  3 033   7   4  2700.
 6 RUNOFF 1 033       6     0.081      78.4     0.24        1
 6 ADDHYD 4 033   4 6 7                                      1
 6 ADDHYD 4 033   3 7 4                                      1
 6 DIVERT 6 033   4 3 1    50.                               1
 6 REACH  3 014   3   6  2800.
 6 RUNOFF 1 014       4     0.068      64.7     0.64        1
 6 ADDHYD 4 014   4 6 7                                      1
 6 ADDHYD 4 024   7 5 4                                      1
 6 RESVOR 2    02 4   6   5815.0                            1 1   1
 6 REACH  3 012   6   7  1350.
 6 RUNOFF 1 011       5     0.032      92.0     0.17        1
 6 REACH  3 010   5   4  2300.
 6 RUNOFF 1 010       5     0.086      89.0     0.17        1
 6 ADDHYD 4 012   4 5 6                                      1
 6 ADDHYD 4 012   6 7 5                                      1
 6 RUNOFF 1 012       7     0.102      86.1     0.30        1
 6 ADDHYD 4 012   7 5 6                                      1
 6 REACH  3 006   6   7  1400.
 6 RUNOFF 1 006       5     0.084      77.6     0.25        1
 6 ADDHYD 4 006   5 7 6                                      1
 6 RUNOFF 1 008       7     0.084      78.2     0.28        1
 6 ADDHYD 4 006   7 6 5                                      1
 6 RESVOR 2    01 5   7   5770.0                            1 1   1
 6 REACH  3 004   7   6  2100.
 6 RUNOFF 1 004       5     0.084      80.2     0.25        1
 6 ADDHYD 4 004   5 6 7                                      1
 6 RUNOFF 1 003       5     0.085      78.0     0.23        1
 6 ADDHYD 4 004   7 5 4                                      1
 6 REACH  3 002   4   6   500.
 6 RUNOFF 1 002       7     0.155      78.0     0.26        1
 6 ADDHYD 4 002   7 6 4                                      1
 6 REACH  3 002   4   6  1120.
 6 RUNOFF 1 001       5     0.043      78.0     0.23        1
 6 ADDHYD 4 001   6 5 7                                      1 1   1
   ENDATA
 7 INCREM 6                0.10
 7 COMPUT 7 062   001      0.0          3.00        1.0    7 2  01  01
```

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

   ENDCMP 1
   ENDJOB 2


******************************END OF 80-80 LIST*******************************


EXECUTIVE CONTROL OPERATION INCREM     MAIN TIME INCREMENT =   .10 HOURS                                        RECORD ID


EXECUTIVE CONTROL OPERATION COMPUT     FROM XSECTION  62  TO XSECTION   1                                       RECORD ID
       STARTING TIME =   .00    RAIN DEPTH =  3.00    RAIN DURATION=  1.00    RAIN TABLE NO.= 7    ANT. MOIST. COND= 2
       ALTERNATE NO.= 1         STORM NO.= 1    MAIN TIME INCREMENT =   .10 HOURS


OPERATION RUNOFF   CROSS SECTION  62

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              6.41                          20.89                       (RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 60. MAX.FLOW LESS THAN 2ND TABLE VALUE.

    ***  WARNING  REACH  60 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT  ***


OPERATION REACH    CROSS SECTION  60

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              6.53                          20.61                      5930.37


OPERATION RUNOFF   CROSS SECTION  60

          PEAK TIME(HRS)              PEAK DISCHARGE(CFS)          PEAK ELEVATION(FEET)
              6.31                           9.04                       (RUNOFF)


OPERATION ADDHYD   CROSS SECTION  60
```

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	27.56	5930.50
19.97	2.10	5930.04
23.96	1.08	5930.02

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	6.16	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 56. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	21.31	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	22.54	5930.29

OPERATION ADDHYD CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	48.28	5930.49
10.02	5.95	5930.12
13.04	4.84	5930.10
19.96	3.62	5930.07
23.93	1.86	5930.04

OPERATION RESVOR STRUCTURE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	43.78	5933.52
10.05	5.96	5930.92
13.06	4.84	5930.75
19.97	3.61	5930.56
23.96	1.87	5930.29

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 54. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	30.11	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	56.02	5880.52
10.03	7.88	5880.08
13.09	6.37	5880.06
19.98	4.72	5880.05
23.95	2.43	5880.02

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	7.18	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 50. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	26.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	29.59	5898.35
23.92	1.03	5898.02

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	23.47	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 46. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	17.98	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.38	31.69	5898.32

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	61.27	5898.54
9.98	6.11	5898.12
13.00	4.91	5898.10
19.95	3.61	5898.07
23.91	1.85	5898.04

OPERATION RESVOR STRUCTURE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	60.73	5899.51
9.99	6.11	5898.15
13.01	4.91	5898.12
19.96	3.61	5898.09
23.93	1.85	5898.05

*** WARNING REACH 44 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	3.58	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	62.88	5880.58
9.99	6.34	5880.13
13.00	5.10	5880.10
19.95	3.75	5880.08
23.91	1.93	5880.04

OPERATION ADDHYD CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	116.43	5880.74
9.99	14.23	5880.14
13.04	11.46	5880.11
19.96	8.47	5880.08
23.92	4.35	5880.04

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	9.06	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 36. MAX.FLOW LESS THAN 2ND TABLE VALUE.

*** WARNING REACH 36 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 39. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.44	8.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.67	12.92	5858.32

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.84	103.25	5851.70
13.21	13.08	5851.13
20.07	9.69	5851.09
23.99	4.98	5850.95

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	24.19	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 40. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	75.91	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	76.73	5862.81
12.95	3.67	5862.42
19.96	2.60	5862.42
23.91	1.32	5862.41

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.74	138.71	5851.83
13.08	16.72	5851.17
19.98	12.27	5851.12
23.95	6.31	5850.99

OPERATION RUNOFF CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	30.89	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.72	142.22	5851.85
13.04	17.45	5851.17
19.97	12.80	5851.13
23.89	6.57	5851.00

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	43.76	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 28. MAX.FLOW LESS THAN 2ND TABLE VALUE.

*** WARNING REACH 29 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	43.17	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	76.91	5924.66
9.98	4.87	5924.05
13.00	3.82	5924.04
19.95	2.71	5924.03
23.94	1.38	5924.01

OPERATION RESVOR STRUCTURE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	63.64	5926.60
7.71	13.20	5924.55
7.90	10.76	5924.45
8.07	9.84	5924.41
9.99	4.87	5924.20
13.01	3.82	5924.16
19.95	2.71	5924.11
23.95	1.38	5924.06

*** WARNING REACH 27 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	5.30	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.64	65.20	5872.56
7.80	13.83	5872.14
8.00	11.45	5872.11
8.16	10.47	5872.10
10.02	5.25	5872.05
13.07	4.13	5872.04
19.97	2.94	5872.03
23.97	1.50	5872.02

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	47.87	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	88.04	5872.65
7.80	18.40	5872.18
8.00	15.94	5872.16
9.98	7.56	5872.08
13.01	5.93	5872.06
19.95	4.22	5872.04
23.94	2.15	5872.02

*** WARNING REACH 25 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	6.79	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	91.49	5830.67
7.80	19.41	5830.19
8.00	16.95	5830.17
9.98	8.12	5830.08
12.99	6.38	5830.06
19.95	4.55	5830.05
23.92	2.32	5830.02

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.66	219.02	5816.45
13.08	23.80	5815.33
19.99	17.32	5815.24
23.96	8.88	5815.12

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	31.95	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	228.44	5831.24
13.06	24.99	5830.30
19.98	18.17	5830.22
23.94	9.32	5830.11

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	49.61	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	249.39	5831.30
13.12	27.07	5830.32
20.03	19.65	5830.24
23.98	10.07	5830.12

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	79.84	(RUNOFF)
23.90	1.01	(RUNOFF)

*** WARNING REACH 20 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	48.58	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	96.13	5854.46
12.92	3.87	5853.08
19.95	2.68	5853.05
23.85	1.36	5853.03

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	79.63	(RUNOFF)
7.95	5.12	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	166.37	(NULL)
9.95	7.67	(NULL)
12.88	5.92	(NULL)
19.91	4.10	(NULL)
23.86	2.09	(NULL)

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	27.59	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	141.19	5852.25
13.03	7.02	5849.19
19.96	4.88	5849.10
23.97	2.47	5849.00

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	47.09	(RUNOFF)
7.96	2.81	(RUNOFF)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 33. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.05	78.53	(RUNOFF)
7.95	4.10	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	105.83	5848.61
7.95	6.88	5848.06

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	191.56	5848.81
12.91	9.74	5848.08
19.95	6.79	5848.05
23.84	3.44	5848.03

OPERATION DIVERT CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)	
5.90	50.00*	5848.40	* FIRST POINT OF FLAT PEAK
12.91	9.74	5848.08	
19.95	6.79	5848.05	
23.84	3.44	5848.03	

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	141.56	(DIVERT)

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 14. MAX.FLOW LESS THAN 2ND TABLE VALUE.

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	12.44	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.24	51.79	5849.93
13.05	10.52	5848.24
20.00	7.34	5848.11
23.96	3.72	5847.96

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	300.97	5831.44
13.10	37.59	5830.45
20.02	26.99	5830.32
23.97	13.80	5830.17

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.70	297.88	5817.91
13.14	37.58	5815.42
20.05	27.00	5815.30
24.00	13.79	5815.15

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 2.31 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.11	2.15	13.51
6.00	DISCHG	44.23	99.90	175.79	221.27	263.51	287.40	296.36	297.87	296.16	292.06
7.00	DISCHG	285.43	276.45	265.53	253.12	240.10	227.17	214.16	200.06	183.22	159.93
8.00	DISCHG	148.31	138.19	129.64	121.27	113.14	105.06	97.45	90.49	84.28	78.78
9.00	DISCHG	73.93	69.65	65.92	62.69	59.92	57.57	55.61	53.99	52.68	51.63
10.00	DISCHG	50.80	50.13	49.54	48.87	48.04	47.06	46.01	44.95	43.95	43.04
11.00	DISCHG	42.19	41.41	40.70	40.06	39.52	39.06	38.67	38.34	38.07	37.87
12.00	DISCHG	37.72	37.61	37.51	37.45	37.43	37.43	37.43	37.44	37.46	37.49
13.00	DISCHG	37.54	37.58	37.57	37.49	37.31	37.03	36.70	36.34	35.99	35.67
14.00	DISCHG	35.38	35.09	34.79	34.48	34.14	33.79	33.45	33.13	32.84	32.59
15.00	DISCHG	32.36	32.15	31.94	31.67	31.30	30.86	30.39	29.92	29.47	29.05
16.00	DISCHG	28.67	28.31	27.99	27.71	27.46	27.25	27.07	26.92	26.80	26.71
17.00	DISCHG	26.64	26.58	26.55	26.52	26.50	26.50	26.50	26.50	26.51	26.52
18.00	DISCHG	26.54	26.55	26.57	26.59	26.61	26.64	26.66	26.68	26.70	26.73
19.00	DISCHG	26.75	26.78	26.80	26.82	26.85	26.87	26.89	26.92	26.94	26.96
20.00	DISCHG	26.99	26.99	26.91	26.61	26.01	25.16	24.16	23.11	22.07	21.08
21.00	DISCHG	20.15	19.27	18.44	17.68	17.02	16.45	15.95	15.51	15.15	14.86

22.00	DISCHG	14.64	14.44	14.28	14.15	14.05	13.99	13.93	13.88	13.84	13.82
23.00	DISCHG	13.81	13.80	13.78	13.77	13.77	13.78	13.78	13.78	13.77	13.78
24.00	DISCHG	13.79	13.78	13.65	13.30	12.63	11.72	10.69	9.61	8.56	7.54
25.00	DISCHG	6.57	5.67	4.83	4.07	3.39	2.79	2.27	1.84	1.40	1.18
26.00	DISCHG	.93	.73	.56	.44	.33	.25	.19	.15	.11	.08
27.00	DISCHG	.06	.04	.03	.02	.02	.01	.00			

RUNOFF VOLUME ABOVE BASEFLOW = .70 WATERSHED INCHES, 1048.88 CFS-HRS, 86.68 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 12 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 11

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.97	64.02	(RUNOFF)
7.95	2.34	(RUNOFF)

*** WARNING REACH 10 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.98	153.75	(RUNOFF)
7.95	5.92	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.99	208.43	5796.70
7.95	8.20	5793.60
9.94	4.07	5793.50
19.86	2.08	5793.45
23.78	1.07	5793.43

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	269.37	5797.42
6.62	314.63	5797.55
12.98	40.60	5794.41
19.96	29.09	5794.13
23.77	14.84	5793.77

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	140.46	(RUNOFF)
7.95	6.45	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	407.18	5797.79
6.57	332.71	5797.59
12.96	43.07	5794.44
19.96	30.79	5794.17
23.79	15.71	5793.79

*** WARNING REACH 6 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	79.25	(RUNOFF)
7.95	4.13	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	461.78	5772.02
6.65	340.80	5771.69
12.93	44.69	5770.63
19.98	31.86	5770.45
23.87	16.28	5770.23

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	78.08	(RUNOFF)
7.95	4.20	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6