

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

5	REACH	3	115	2	1	1800.0000	.8000	1.55000	0	0	0	0	0	1
5	ADDHYD	4	13	1	3	2			0	0	0	0	0	1
6	RUNOFF	1	18		1	.1300	87.0000	.23000	0	0	0	0	0	1
6	RUNOFF	1	17		3	.1700	85.0000	.30000	0	0	0	0	0	1
6	ADDHYD	4	18	1	3	6			0	0	0	0	0	1
6	REACH	3	114	6	3	1750.0000	.7000	1.56000	0	0	0	0	0	1
6	ADDHYD	4	13	3	2	1			0	0	0	0	0	1
6	REACH	3	106	1	2	3100.0000	.3000	1.64000	0	0	0	0	0	1
6	RUNOFF	1	6		1	.1300	81.0000	.37000	0	0	0	0	0	1
6	ADDHYD	4	6	1	2	3			0	0	0	0	0	1
6	RUNOFF	1	5		2	.1500	84.0000	.26000	0	0	0	0	0	1
6	ADDHYD	4	6	3	2	1			0	0	0	0	0	1
6	RUNOFF	1	7		3	.1900	93.0000	.54000	0	0	0	0	0	1
6	ADDHYD	4	6	3	1	2			0	0	0	0	0	1
6	RUNOFF	1	11		1	.1600	91.0000	.35000	0	0	0	0	0	1
6	RUNOFF	1	12		3	.1300	93.0000	.30000	0	0	0	0	0	1
6	ADDHYD	4	11	3	1	5			0	0	0	0	0	1
6	REACH	3	107	5	1	2650.0000	1.0000	1.45000	0	0	0	0	0	1
6	ADDHYD	4	6	1	2	3			1	1	0	1	0	1
6	REACH	3	104	3	1	1950.0000	.2000	1.65000	0	0	0	0	0	1
6	RUNOFF	1	4		2	.1900	86.0000	.24000	0	0	0	0	0	1
6	ADDHYD	4	4	1	2	3			0	0	0	0	0	1
6	RUNOFF	1	8		2	.2000	91.0000	.39000	0	0	0	0	0	1
6	ADDHYD	4	8	3	2	1			0	0	0	0	0	1
6	RUNOFF	1	10		2	.1400	85.0000	.17000	0	0	0	0	0	1
5	REACH	3	109	2	3	2350.0000	1.8000	1.41000	0	0	0	0	0	1
5	RUNOFF	1	9		2	.2500	87.0000	.15000	0	0	0	0	0	1
6	ADDHYD	4	9	3	2	4			0	0	0	0	0	1
6	REACH	3	108	4	2	2500.0000	.9000	1.47000	0	0	0	0	0	1
6	ADDHYD	4	99	1	2	4			1	1	0	1	0	1

ENDATA

END OF LISTING

1

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

EXECUTIVE CONTROL OPERATION INCREM

+

MAIN TIME INCREMENT = .08 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

+

FROM XSECTION 82

+

TO STRUCTURE 99

STARTING TIME = .00 RAIN DEPTH = 4.40 RAIN DURATION= 1.00

ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .08 HO

*** WARNING REACH 174 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 173 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 172 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 177 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 170 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 70

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.46	2380.85	(NULL
8.11	248.98	(NULL
10.00	124.79	(NULL
11.82	146.82	(NULL
12.79	108.68	(NULL
16.21	86.73	(NULL
19.97	67.58	(NULL
21.80	36.41	(NULL
22.80	36.44	(NULL
23.80	36.54	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.
4.98	DISCHG	.00	.00	.00
5.81	DISCHG	210.07	452.76	757.38
6.64	DISCHG	1900.49	1548.76	1240.98
7.47	DISCHG	356.81	323.07	294.56
8.30	DISCHG	238.57	229.81	217.37
9.13	DISCHG	129.31	127.40	126.16
9.96	DISCHG	124.69	124.70	123.97
10.79	DISCHG	76.98	72.58	69.51
11.62	DISCHG	132.17	142.31	146.40
12.45	DISCHG	95.21	98.96	104.11
13.28	DISCHG	78.62	74.28	71.22
14.11	DISCHG	65.46	65.90	66.73
14.94	DISCHG	77.08	77.60	77.97
15.77	DISCHG	80.41	81.44	82.68

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

16.60	DISCHG	78.30	75.21	72.64	70.70	69.34	68.41
17.43	DISCHG	66.87	66.81	66.78	66.77	66.78	66.79
18.26	DISCHG	66.93	66.96	66.99	67.02	67.05	67.08
19.09	DISCHG	67.24	67.27	67.30	67.33	67.37	67.40
19.92	DISCHG	67.55	67.57	67.44	66.73	65.18	63.26
20.75	DISCHG	46.71	43.50	40.76	38.14	35.68	33.78
21.58	DISCHG	34.63	35.77	36.32	36.38	35.99	35.01
22.41	DISCHG	32.12	33.09	34.47	35.69	36.32	36.42
23.24	DISCHG	31.93	31.84	32.18	33.12	34.49	35.74
24.07	DISCHG	33.78	31.62	28.78	25.76	22.77	19.32

RUNOFF VOLUME ABOVE BASEFLOW = 1.50 WATERSHED INCHES, 3473.34 CFS-HRS, 2

*** WARNING REACH 187 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 169 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 186 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 63

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.55	2689.02	(NULL
10.01	154.03	(NULL
11.89	172.61	(NULL
12.83	131.10	(NULL
16.27	105.91	(NULL
20.01	83.13	(NULL
21.85	44.09	(NULL
22.86	44.05	(NULL
23.86	44.17	(NULL

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .	
4.98	DISCHG	.00	.00	.00	.00	.00	.00
5.81	DISCHG	99.20	295.73	631.28	1068.91	1543.11	1965.96
6.64	DISCHG	2582.14	2316.59	1971.90	1629.02	1335.87	1102.68
7.47	DISCHG	513.74	460.64	416.90	381.17	353.93	334.84
8.30	DISCHG	302.52	291.78	279.32	264.81	247.38	228.31
9.13	DISCHG	166.54	162.10	159.10	157.10	155.79	154.96
9.96	DISCHG	153.97	154.00	153.73	152.30	148.65	143.01
10.79	DISCHG	104.66	97.50	91.85	87.74	85.40	86.37
11.62	DISCHG	144.58	159.25	169.02	172.46	171.40	166.06
12.45	DISCHG	123.04	122.38	124.75	128.36	130.83	130.92
13.28	DISCHG	105.74	99.06	93.64	89.55	86.61	84.56
14.11	DISCHG	80.91	80.99	81.57	82.64	83.94	85.36
14.94	DISCHG	93.58	94.57	95.30	95.83	96.22	96.50
15.77	DISCHG	98.15	99.35	100.73	102.23	103.88	105.31
16.60	DISCHG	99.70	96.58	93.32	90.38	87.98	86.16

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REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

17.43	DISCHG	82.65	82.47	82.37	82.31	82.28	82.27
18.26	DISCHG	82.37	82.40	82.44	82.47	82.51	82.55
19.09	DISCHG	82.73	82.77	82.81	82.84	82.88	82.92
19.92	DISCHG	83.10	83.13	83.11	82.77	81.71	79.65
20.75	DISCHG	62.71	58.27	54.17	50.62	47.46	44.69
21.58	DISCHG	41.73	42.76	43.67	44.07	43.97	43.49
22.41	DISCHG	39.92	40.36	41.25	42.44	43.49	44.00
23.24	DISCHG	40.46	39.96	40.01	40.44	41.30	42.49
24.07	DISCHG	42.79	41.19	38.71	35.27	31.36	27.51

RUNOFF VOLUME ABOVE BASEFLOW = 1.55 WATERSHED INCHES, 4341.19 CFS-HRS, 3

*** WARNING REACH 164 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 159 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.60	3295.14	(NULL
11.96	212.63	(NULL
12.76	166.77	(NULL
16.28	136.31	(NULL
19.98	108.45	(NULL
21.89	56.17	(NULL
22.92	56.02	(NULL
23.92	56.15	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.98	DISCHG .00 .00 .00 .01 .13 .54		
5.81	DISCHG 406.33 746.70 1191.56 1729.18 2257.78 2652.43		
6.64	DISCHG 3279.66 3146.89 2874.55 2513.07 2131.11 1781.23		
7.47	DISCHG 778.51 685.50 613.37 556.96 512.69 478.67		
8.30	DISCHG 399.42 386.08 371.03 354.72 336.96 317.26		
9.13	DISCHG 230.41 221.70 215.48 211.15 208.18 206.20		
9.96	DISCHG 203.11 202.96 202.12 199.49 194.96 188.92		
10.79	DISCHG 146.41 137.04 128.65 121.86 118.14 119.36		
11.62	DISCHG 179.67 192.84 203.20 210.09 212.60 210.95		
12.45	DISCHG 173.30 169.08 167.19 166.72 166.76 166.63		
13.28	DISCHG 145.39 137.46 129.92 123.43 118.27 114.37		
14.11	DISCHG 106.73 106.77 107.37 108.40 109.78 111.37		
14.94	DISCHG 120.89 122.46 123.72 124.68 125.40 125.93		
15.77	DISCHG 128.58 129.88 131.45 133.17 134.77 135.90		
16.60	DISCHG 131.16 128.35 125.04 121.53 118.20 115.33		
17.43	DISCHG 108.59 108.18 107.91 107.74 107.64 107.58		
18.26	DISCHG 107.60 107.63 107.67 107.71 107.74 107.79		
19.09	DISCHG 108.00 108.04 108.08 108.12 108.17 108.21		
19.92	DISCHG 108.42 108.45 108.32 107.65 106.12 103.89		

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
 REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

20.75	DISCHG	85.21	79.92	74.60	69.63	65.27	61.67
21.58	DISCHG	55.05	55.34	55.72	56.06	56.16	55.91
22.41	DISCHG	53.33	53.49	53.98	54.63	55.27	55.78
23.24	DISCHG	54.14	53.65	53.43	53.59	54.07	54.72
24.07	DISCHG	55.39	53.88	51.12	47.36	42.94	38.19

RUNOFF VOLUME ABOVE BASEFLOW = 1.74 WATERSHED INCHES, 6032.27 CFS-HRS, 4

OPERATION REACH CROSS SECTION 151

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.73	3230.47	(NULL
12.11	209.54	(NULL
16.42	135.84	(NULL
20.08	108.42	(NULL
22.02	56.02	(NULL
23.06	55.80	(NULL
24.05	55.93	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .		
4.98	DISCHG	.00	.00	.00	.00	.00	.07
5.81	DISCHG	103.88	267.39	526.52	886.06	1341.88	1837.05
6.64	DISCHG	3172.13	3230.27	3185.19	3017.25	2744.67	2412.96
7.47	DISCHG	1058.69	907.22	787.35	693.29	619.59	561.79
8.30	DISCHG	424.32	410.86	397.46	383.17	367.79	351.12
9.13	DISCHG	256.64	242.46	231.24	222.72	216.46	211.99
9.96	DISCHG	203.74	203.40	203.16	202.60	200.92	197.70
10.79	DISCHG	163.29	154.16	144.90	136.12	128.41	122.86
11.62	DISCHG	153.59	167.69	181.29	193.13	202.30	207.87
12.45	DISCHG	187.09	179.64	173.93	170.29	168.36	167.49
13.28	DISCHG	156.67	150.57	143.49	136.15	129.27	123.32
14.11	DISCHG	108.45	107.52	107.11	107.25	107.87	108.90
14.94	DISCHG	117.37	119.27	121.00	122.47	123.66	124.60
15.77	DISCHG	127.15	127.92	128.98	130.32	131.86	133.43
16.60	DISCHG	134.30	132.60	130.30	127.46	124.25	120.98
17.43	DISCHG	110.24	109.35	108.72	108.28	107.99	107.80
18.26	DISCHG	107.57	107.58	107.61	107.64	107.68	107.71
19.09	DISCHG	107.92	107.96	108.00	108.04	108.09	108.13
19.92	DISCHG	108.34	108.38	108.42	108.36	107.98	106.98
20.75	DISCHG	93.23	88.89	84.04	78.94	73.90	69.24
21.58	DISCHG	56.06	55.51	55.42	55.58	55.84	56.01
22.41	DISCHG	54.00	53.63	53.56	53.79	54.24	54.80
23.24	DISCHG	55.13	54.59	54.08	53.73	53.65	53.88
24.07	DISCHG	55.92	55.63	54.68	52.76	49.84	46.11

RUNOFF VOLUME ABOVE BASEFLOW = 1.74 WATERSHED INCHES, 6028.37 CFS-HRS, 4

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

OPERATION REACH CROSS SECTION 152

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.17	600.45	(NULL
8.10	30.44	(NULL
10.00	14.37	(NULL
11.65	19.06	(NULL
12.65	13.22	(NULL
16.12	9.86	(NULL
19.92	7.27	(NULL
	*	
23.65	4.13	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .		
4.15	DISCHG	.00	.00	.05	.25	.63	1.13
4.98	DISCHG	1.93	1.99	2.33	3.86	6.40	9.01
5.81	DISCHG	198.56	319.33	430.52	527.95	596.58	579.46
6.64	DISCHG	171.95	129.86	99.52	78.78	65.08	56.20
7.47	DISCHG	32.78	30.31	28.66	28.09	28.35	28.92
8.30	DISCHG	26.24	23.35	20.75	18.64	17.08	16.02
9.13	DISCHG	14.43	14.39	14.37	14.36	14.35	14.35
9.96	DISCHG	14.36	14.36	14.28	13.66	12.46	11.18
10.79	DISCHG	7.64	7.45	7.34	7.28	7.38	8.55

11.62	DISCHG	18.96	18.78	17.05	14.86	12.79	11.02
12.45	DISCHG	11.76	12.59	13.17	13.09	12.23	11.13
13.28	DISCHG	7.70	7.50	7.38	7.31	7.27	7.25
14.11	DISCHG	7.24	7.33	7.56	7.82	8.06	8.26
14.94	DISCHG	8.65	8.67	8.68	8.68	8.68	8.69
15.77	DISCHG	9.01	9.27	9.51	9.71	9.85	9.79
16.60	DISCHG	7.81	7.60	7.46	7.38	7.32	7.29
17.43	DISCHG	7.26	7.26	7.26	7.26	7.26	7.26
18.26	DISCHG	7.26	7.26	7.26	7.26	7.26	7.26
19.09	DISCHG	7.27	7.27	7.27	7.27	7.27	7.27
19.92	DISCHG	7.27	7.27	7.27	7.15	6.76	6.23
20.75	DISCHG	4.35	3.99	3.68	3.44	3.25	3.18
21.58	DISCHG	4.06	4.12	4.01	3.79	3.58	3.38
22.41	DISCHG	3.70	3.89	4.05	4.12	4.02	3.81
23.24	DISCHG	3.26	3.47	3.69	3.89	4.05	4.13
24.07	DISCHG	3.24	3.04	2.61	2.04	1.51	1.05

RUNOFF VOLUME ABOVE BASEFLOW = 3.31 WATERSHED INCHES, 577.40 CFS-HRS,

OPERATION ADDHYD STRUCTURE 51

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TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

PEAK TIME(HRS)

PEAK DISCHARGE(CFS)

PEAK ELEVA

6.64

3534.41

(NULL

12.07

233.15

(NULL

16.27

157.02

(NULL

19.98

126.11

(NULL

23.91

63.94

(NULL

TIME(HRS)

FIRST HYDROGRAPH POINT = .00 HOURS

TIME INCREMENT = .

4.15	DISCHG	.00	.00	.05	.25	.63	1.13
4.98	DISCHG	1.93	1.99	2.33	3.86	6.41	9.13
5.81	DISCHG	491.61	924.08	1454.14	2041.70	2610.00	3025.51
6.64	DISCHG	3534.36	3513.97	3411.12	3202.24	2901.58	2550.39
7.47	DISCHG	1137.39	980.32	857.12	762.16	689.06	632.35
8.30	DISCHG	483.56	463.51	444.74	426.28	407.91	389.23
9.13	DISCHG	291.45	277.13	265.83	257.26	250.98	246.49
9.96	DISCHG	238.26	237.80	236.77	234.07	229.33	223.19
10.79	DISCHG	181.71	172.20	162.69	154.00	147.68	146.29
11.62	DISCHG	198.68	210.51	219.22	225.91	230.74	232.95
12.45	DISCHG	216.78	210.85	205.65	200.84	196.42	192.92
13.28	DISCHG	175.25	168.77	161.43	153.93	146.96	140.95
14.11	DISCHG	126.12	125.56	125.76	126.51	127.64	129.07
14.94	DISCHG	138.32	140.27	142.02	143.51	144.72	145.67
15.77	DISCHG	149.34	150.73	152.31	154.04	155.67	156.74
16.60	DISCHG	153.08	150.98	148.42	145.41	142.09	138.75
17.43	DISCHG	127.91	127.01	126.38	125.94	125.65	125.46
18.26	DISCHG	125.25	125.27	125.30	125.33	125.37	125.41
19.09	DISCHG	125.63	125.67	125.72	125.76	125.81	125.85
19.92	DISCHG	126.08	126.11	126.00	125.35	123.82	121.54
20.75	DISCHG	103.50	98.33	92.80	87.19	81.85	77.20
21.58	DISCHG	66.03	65.41	64.90	64.52	64.29	64.07

22.41	DISCHG	63.32	63.35	63.52	63.70	63.76	63.77
23.24	DISCHG	63.40	63.40	63.39	63.44	63.63	63.83
24.07	DISCHG	63.59	62.57	60.41	57.10	52.98	48.29

RUNOFF VOLUME ABOVE BASEFLOW = 1.85 WATERSHED INCHES, 7284.06 CFS-HRS, 6

OPERATION REACH CROSS SECTION 150

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.50	466.70	(NULL
11.92	19.90	(NULL
12.86	15.29	(NULL
16.33	11.92	(NULL
20.04	9.22	(NULL
23.89	4.91	(NULL

1 TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

4.98	DISCHG	.00	.00	.00	.00	.00	.00
5.81	DISCHG	9.00	27.27	64.16	123.84	203.99	294.08
6.64	DISCHG	424.10	375.32	321.50	269.73	224.32	186.52
7.47	DISCHG	82.82	72.20	63.47	56.37	50.75	46.48
8.30	DISCHG	37.93	36.65	34.95	32.88	30.57	28.23
9.13	DISCHG	20.50	19.80	19.28	18.89	18.60	18.38
9.96	DISCHG	17.93	17.90	17.87	17.79	17.57	17.15
10.79	DISCHG	12.68	11.85	11.17	10.63	10.24	10.06
11.62	DISCHG	15.57	17.43	18.91	19.76	19.84	19.22
12.45	DISCHG	14.08	14.03	14.32	14.76	15.14	15.29
13.28	DISCHG	12.41	11.69	11.08	10.59	10.21	9.92
14.11	DISCHG	9.26	9.23	9.23	9.28	9.38	9.54
14.94	DISCHG	10.44	10.56	10.65	10.72	10.77	10.81
15.77	DISCHG	10.96	11.04	11.17	11.35	11.55	11.74
16.60	DISCHG	11.31	10.96	10.62	10.31	10.04	9.83
17.43	DISCHG	9.32	9.28	9.25	9.23	9.21	9.20
18.26	DISCHG	9.18	9.18	9.18	9.18	9.18	9.19
19.09	DISCHG	9.19	9.20	9.20	9.20	9.20	9.20
19.92	DISCHG	9.21	9.22	9.22	9.20	9.15	9.02
20.75	DISCHG	7.22	6.79	6.36	5.95	5.56	5.21
21.58	DISCHG	4.65	4.76	4.86	4.93	4.93	4.87
22.41	DISCHG	4.35	4.40	4.51	4.65	4.78	4.88
23.24	DISCHG	4.47	4.38	4.36	4.40	4.51	4.65
24.07	DISCHG	4.75	4.59	4.39	4.13	3.78	3.37

RUNOFF VOLUME ABOVE BASEFLOW = 2.54 WATERSHED INCHES, 622.19 CFS-HRS,

OPERATION ADDHYD STRUCTURE 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.43	616.00	(NULL
11.85	26.66	(NULL
12.78	20.67	(NULL

16.25	16.17	(NULL
19.92	12.55	(NULL
23.82	6.63	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.98	DISCHG .00 .00 .00 .00	.01 .03	
5.81	DISCHG 54.56 108.85 188.82 290.70	402.20 502.85	
6.64	DISCHG 515.94 449.45 382.24 320.01	266.48 222.43	
7.47	DISCHG 101.49 89.00 78.88 70.87	64.74 60.22	
8.30	DISCHG 50.13 47.81 45.07 42.05	38.99 36.11	
9.13	DISCHG 27.26 26.49 25.91 25.48	25.17 24.93	
9.96	DISCHG 24.44 24.39 24.26 23.95	23.36 22.49	
10.79	DISCHG 16.40 15.45 14.68 14.12	13.87 14.08	
11.62	DISCHG 23.39 25.32 26.44 26.63	25.97 24.65	
12.45	DISCHG 19.39 19.64 20.10 20.51	20.67 20.48	

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

13.28	DISCHG	16.13	15.29	14.59	14.04	13.62	13.30
14.11	DISCHG	12.60	12.60	12.66	12.80	13.00	13.24
14.94	DISCHG	14.35	14.48	14.59	14.66	14.72	14.77
15.77	DISCHG	15.05	15.23	15.45	15.71	15.95	16.12
16.60	DISCHG	14.99	14.54	14.13	13.76	13.46	13.22
17.43	DISCHG	12.65	12.61	12.58	12.55	12.54	12.53
18.26	DISCHG	12.51	12.51	12.51	12.51	12.51	12.51
19.09	DISCHG	12.52	12.53	12.53	12.53	12.53	12.54
19.92	DISCHG	12.55	12.54	12.52	12.44	12.27	11.97
20.75	DISCHG	9.33	8.76	8.19	7.66	7.18	6.78
21.58	DISCHG	6.47	6.60	6.68	6.68	6.60	6.46
22.41	DISCHG	6.02	6.14	6.31	6.48	6.59	6.63
23.24	DISCHG	6.01	5.97	6.02	6.14	6.31	6.48
24.07	DISCHG	6.27	6.00	5.65	5.18	4.63	4.02

RUNOFF VOLUME ABOVE BASEFLOW = 2.61 WATERSHED INCHES, 858.64 CFS-HRS,

*** WARNING REACH 149 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
*** WARNING REACH 148 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
*** WARNING REACH 141 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
*** WARNING REACH 185 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
*** WARNING REACH 137 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
*** WARNING REACH 157 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
*** WARNING REACH 154 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

PERATION ADDHYD STRUCTURE 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.13	2385.37	(NULL
8.04	123.51	(NULL

9.92	58.55	(NULL
11.60	77.87	(NULL
12.60	54.15	(NULL
16.07	40.28	(NULL
19.89	29.74	(NULL
21.60	16.85	(NULL
22.60	16.86	(NULL
23.60	16.87	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.15 DISCHG	.01 .09	.42 1.13	2.19 3.36
4.98 DISCHG	4.73 5.33	7.82 12.79	18.97 25.13

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

5.81	DISCHG	922.32	1406.99	1873.69	2247.23	2384.16	2190.57
6.64	DISCHG	575.74	444.51	352.08	289.11	246.53	217.75
7.47	DISCHG	126.80	118.50	114.46	114.32	116.53	119.41
8.30	DISCHG	100.24	88.37	78.53	71.31	66.38	63.24
9.13	DISCHG	58.77	58.62	58.54	58.49	58.47	58.47
9.96	DISCHG	58.53	58.34	56.94	53.12	47.81	42.63
10.79	DISCHG	30.66	30.14	29.82	29.93	32.57	39.93
11.62	DISCHG	77.75	73.38	64.65	55.26	47.09	41.06
12.45	DISCHG	50.44	53.23	54.08	51.91	47.53	42.70
13.28	DISCHG	30.85	30.32	30.00	29.80	29.68	29.61
14.11	DISCHG	29.76	30.44	31.47	32.55	33.46	34.16
14.94	DISCHG	35.35	35.40	35.43	35.45	35.47	35.48
15.77	DISCHG	37.38	38.46	39.40	40.08	40.21	39.30
16.60	DISCHG	31.26	30.63	30.24	30.00	29.86	29.77
17.43	DISCHG	29.66	29.66	29.66	29.66	29.67	29.67
18.26	DISCHG	29.68	29.68	29.69	29.69	29.69	29.70
19.09	DISCHG	29.71	29.71	29.72	29.72	29.72	29.72
19.92	DISCHG	29.74	29.72	29.45	28.41	26.47	24.27
20.75	DISCHG	16.93	15.55	14.41	13.55	13.06	13.17
21.58	DISCHG	16.83	16.69	15.96	14.99	14.09	13.36
22.41	DISCHG	15.67	16.41	16.84	16.72	16.01	15.04
23.24	DISCHG	13.76	14.73	15.65	16.40	16.84	16.75
24.07	DISCHG	12.68	11.45	9.41	7.07	4.96	3.29

RUNOFF VOLUME ABOVE BASEFLOW = 3.15 WATERSHED INCHES, 2279.25 CFS-HRS, 1

*** WARNING REACH 153 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 53

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.13	2607.56	(NULL
8.04	137.89	(NULL
9.93	65.44	(NULL
11.60	87.33	(NULL
12.59	60.72	(NULL
16.07	45.19	(NULL
19.90	33.38	(NULL
21.59	18.94	(NULL

22.59	18.96	(NULL
23.59	18.97	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .	
4.15	DISCHG	.01	.09	.42	1.13	2.19	3.36
4.98	DISCHG	4.73	5.33	7.82	12.79	18.97	25.13
5.81	DISCHG	971.85	1506.44	2030.97	2454.35	2605.95	2384.96
6.64	DISCHG	622.15	482.20	383.38	315.77	270.42	239.74
7.47	DISCHG	140.17	131.36	127.24	127.41	130.11	133.43

1

TR20 XEQ 10/ 4/95	10:29	UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83		24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

8.30	DISCHG	110.82	97.52	86.73	78.96	73.68	70.34
9.13	DISCHG	65.61	65.45	65.37	65.33	65.31	65.32
9.96	DISCHG	65.42	65.18	63.52	59.07	52.99	47.16
10.79	DISCHG	34.21	33.65	33.31	33.49	36.68	45.25
11.62	DISCHG	87.09	81.74	71.59	60.93	51.91	45.40
12.45	DISCHG	56.83	59.83	60.59	57.92	52.83	47.35
13.28	DISCHG	34.48	33.91	33.56	33.35	33.22	33.15
14.11	DISCHG	33.35	34.15	35.34	36.56	37.58	38.33
14.94	DISCHG	39.62	39.67	39.71	39.73	39.75	39.76
15.77	DISCHG	41.98	43.22	44.26	44.99	45.08	43.98
16.60	DISCHG	34.97	34.29	33.88	33.63	33.47	33.38
17.43	DISCHG	33.27	33.27	33.27	33.27	33.28	33.28
18.26	DISCHG	33.30	33.30	33.31	33.31	33.32	33.32
19.09	DISCHG	33.34	33.35	33.35	33.35	33.36	33.36
19.92	DISCHG	33.38	33.37	33.03	31.80	29.54	27.04
20.75	DISCHG	18.88	17.34	16.06	15.13	14.62	14.79
21.58	DISCHG	18.93	18.73	17.86	16.75	15.72	14.93
22.41	DISCHG	17.70	18.50	18.95	18.76	17.92	16.81
23.24	DISCHG	15.51	16.63	17.67	18.49	18.95	18.81
24.07	DISCHG	14.18	12.75	10.39	7.72	5.36	3.53

RUNOFF VOLUME ABOVE BASEFLOW = 2.99 WATERSHED INCHES, 2486.99 CFS-HRS, 2

*** WARNING REACH 147 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 143 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 136 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 37

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.30	6693.00	(NULL
11.74	381.53	(NULL
12.55	391.71	(NULL
16.16	274.87	(NULL
19.97	220.41	(NULL
22.63	115.12	(NULL
23.63	115.20	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .	
4.15	DISCHG	.00	.00	.05	.28	.79	1.67

1

4.98	DISCHG	6.27	6.52	6.95	8.64	12.40	18.17
5.81	DISCHG	1186.06	2198.30	3459.14	4826.08	5939.90	6569.19
6.64	DISCHG	5725.48	5477.70	5252.20	5048.09	4849.01	4612.95
7.47	DISCHG	2598.78	2230.77	1923.75	1676.99	1483.73	1334.45
8.30	DISCHG	916.74	854.28	800.05	753.79	714.95	682.03
9.13	DISCHG	553.35	529.49	507.03	486.99	470.06	456.44

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

9.96	DISCHG	425.56	423.36	419.23	411.33	399.39	385.28
10.79	DISCHG	319.59	307.95	296.61	285.91	280.15	283.28
11.62	DISCHG	372.70	380.74	380.09	374.32	367.80	362.16
12.45	DISCHG	387.60	391.59	389.93	381.35	367.06	350.39
13.28	DISCHG	295.90	290.03	284.05	277.41	269.87	261.64
14.11	DISCHG	228.47	226.27	225.88	226.79	228.35	230.28
14.94	DISCHG	241.36	243.67	246.01	248.34	250.58	252.62
15.77	DISCHG	262.43	265.71	269.02	272.15	274.40	274.79
16.60	DISCHG	260.80	258.01	255.32	252.56	249.62	246.42
17.43	DISCHG	228.83	226.27	224.26	222.72	221.60	220.80
18.26	DISCHG	219.38	219.34	219.33	219.34	219.37	219.41
19.09	DISCHG	219.69	219.75	219.81	219.87	219.94	220.00
19.92	DISCHG	220.32	220.36	219.89	217.88	214.04	208.69
20.75	DISCHG	178.03	170.43	162.70	155.04	147.71	141.29
21.58	DISCHG	124.18	121.65	118.65	115.37	112.31	109.78
22.41	DISCHG	111.92	113.67	114.89	115.04	114.03	112.19
23.24	DISCHG	107.84	109.68	111.74	113.59	114.92	115.15
24.07	DISCHG	106.74	103.85	99.40	93.40	86.68	79.78

RUNOFF VOLUME ABOVE BASEFLOW = 2.12 WATERSHED INCHES, 13685.29 CFS-HRS, 11

*** WARNING REACH 129 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 128 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 127 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 184 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 130 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 125 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 120 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 183 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.19	10258.39	(NULL
11.60	561.79	(NULL
12.55	548.81	(NULL
16.06	390.67	(NULL
19.96	311.64	(NULL

1

22.58
23.58163.51
163.51(NULL
(NULL

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
3.32	DISCHG .00 .00 .00 .00 .00 .01		
4.15	DISCHG .13 .35 1.00 2.22 4.23 7.06		
4.98	DISCHG 17.57 20.17 28.14 40.77 57.54 77.94		
5.81	DISCHG 4215.41 6109.73 8122.64 9744.96 10230.33 10242.12		
6.64	DISCHG 7736.93 7145.33 6662.23 6267.42 5940.63 5647.67		
7.47	DISCHG 3622.81 3175.46 2782.64 2450.64 2178.63 1962.11		
8.30	DISCHG 1291.30 1196.87 1113.07 1040.82 979.81 929.46		
9.13	DISCHG 769.48 744.26 719.70 696.38 675.18 656.82		
9.96	DISCHG 608.77 602.95 586.52 566.14 545.77 524.75		
10.79	DISCHG 432.22 418.32 405.37 397.09 412.59 438.41		
11.62	DISCHG 561.57 552.90 540.54 524.99 507.26 491.87		
12.45	DISCHG 537.08 548.31 544.77 531.45 513.35 492.03		
13.28	DISCHG 401.89 392.88 385.43 378.58 371.61 364.07		
14.11	DISCHG 328.37 326.90 326.82 327.89 329.91 332.44		
14.94	DISCHG 345.72 348.18 350.62 353.04 355.45 357.78		
15.77	DISCHG 375.93 380.86 385.76 390.18 390.01 386.64		
16.60	DISCHG 360.74 356.15 352.22 348.76 345.52 342.31		
17.43	DISCHG 324.36 321.09 318.29 316.03 314.26 312.93		
18.26	DISCHG 310.32 310.20 310.15 310.13 310.14 310.18		
19.09	DISCHG 310.47 310.54 310.62 310.69 310.76 310.84		
19.92	DISCHG 311.21 311.23 307.84 300.88 293.00 284.94		
20.75	DISCHG 236.96 226.92 217.09 207.60 200.13 194.93		
21.58	DISCHG 178.37 173.43 168.22 163.22 158.35 153.92		
22.41	DISCHG 159.05 162.12 163.51 162.45 160.29 157.61		
23.24	DISCHG 152.80 155.46 158.61 161.85 163.49 162.60		
24.07	DISCHG 146.20 137.12 127.30 117.81 108.17 98.53		

RUNOFF VOLUME ABOVE BASEFLOW = 2.34 WATERSHED INCHES, 20383.68 CFS-HRS, 16

*** WARNING REACH 113 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 115 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 114 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 106 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 107 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 6

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.19	12778.74	(NULL
11.64	664.97	(NULL
12.62	625.55	(NULL
16.11	449.28	(NULL
19.97	356.51	(NULL
22.63	187.78	(NULL
23.64	187.70	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.
3.32	DISCHG	.00	.00	.00
4.15	DISCHG	.07	.14	.42
4.98	DISCHG	19.42	21.41	24.86
5.81	DISCHG	3879.97	6315.00	8853.97
6.64	DISCHG	9241.10	8473.55	7783.33
7.47	DISCHG	4446.37	3977.60	3526.64
8.30	DISCHG	1578.24	1449.44	1339.54
9.13	DISCHG	895.68	868.81	843.10
9.96	DISCHG	705.42	699.06	688.01
10.79	DISCHG	499.74	483.52	468.87
11.62	DISCHG	663.83	657.40	635.33
12.45	DISCHG	600.56	616.63	625.54
13.28	DISCHG	465.74	452.38	442.02
14.11	DISCHG	380.96	377.97	377.61
14.94	DISCHG	395.94	398.51	401.02
15.77	DISCHG	427.77	434.31	440.32
16.60	DISCHG	414.19	408.49	403.47
17.43	DISCHG	374.57	370.93	367.55
18.26	DISCHG	355.80	355.56	355.41
19.09	DISCHG	355.57	355.64	355.72
19.92	DISCHG	356.35	356.40	355.44
20.75	DISCHG	274.96	262.50	251.02
21.58	DISCHG	208.96	204.43	197.99
22.41	DISCHG	180.78	184.17	187.13
23.24	DISCHG	173.06	176.39	179.97
24.07	DISCHG	170.89	162.94	150.67

RUNOFF VOLUME ABOVE BASEFLOW = 2.40 WATERSHED INCHES, 23681.67 CFS-HRS, 19

*** WARNING REACH 104 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 109 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 108 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 99

1

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.16	14534.06	(NULL

11.62	719.70	(NULL
12.60	664.09	(NULL
16.09	477.27	(NULL
19.96	377.10	(NULL
22.61	199.52	(NULL
23.62	199.44	(NULL

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .	
3.32	DISCHG	.00	.00	.00	.00	.00	.00
4.15	DISCHG	.07	.14	.42	1.28	2.92	5.53
4.98	DISCHG	20.23	22.51	26.70	37.92	57.46	84.18
5.81	DISCHG	4939.75	7797.84	10651.97	13215.24	14498.46	13939.59
6.64	DISCHG	9457.69	8651.13	7933.59	7345.99	6875.35	6493.03
7.47	DISCHG	4521.31	4051.27	3601.72	3202.41	2858.54	2570.08
8.30	DISCHG	1632.29	1496.14	1382.81	1286.92	1205.87	1137.98
9.13	DISCHG	935.97	909.10	883.40	858.53	834.78	812.87
9.96	DISCHG	745.81	739.21	726.00	696.59	662.81	632.40
10.79	DISCHG	520.07	503.82	489.14	477.15	481.35	521.36
11.62	DISCHG	719.69	701.82	668.70	637.69	611.24	588.38
12.45	DISCHG	639.76	656.42	663.88	650.43	625.92	599.38
13.28	DISCHG	486.21	472.80	462.42	454.07	446.75	439.66
14.11	DISCHG	401.69	399.81	400.62	402.23	404.17	406.55
14.94	DISCHG	420.43	423.01	425.52	427.99	430.44	432.87
15.77	DISCHG	454.86	462.20	468.60	474.19	477.25	472.91
16.60	DISCHG	434.83	429.05	423.99	419.66	415.90	412.49
17.43	DISCHG	395.06	391.42	388.04	385.09	382.63	380.67
18.26	DISCHG	376.32	376.08	375.93	375.85	375.83	375.83
19.09	DISCHG	376.10	376.18	376.26	376.34	376.42	376.50
19.92	DISCHG	376.91	376.95	375.62	368.01	355.53	342.96
20.75	DISCHG	285.03	271.65	259.68	248.76	239.21	233.31
21.58	DISCHG	221.06	215.73	208.04	200.41	193.74	187.90
22.41	DISCHG	192.70	196.32	199.24	199.01	195.53	191.24
23.24	DISCHG	183.52	187.79	191.88	195.77	198.96	199.07
24.07	DISCHG	179.01	169.53	154.68	139.60	126.43	114.72

RUNOFF VOLUME ABOVE BASEFLOW = 2.44 WATERSHED INCHES, 25214.97 CFS-HRS, 20

EXECUTIVE CONTROL OPERATION ENDCMP

COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION COMPUT

FROM XSECTION 82

TO STRUCTURE 99

STARTING TIME = .00	RAIN DEPTH = 3.00	RAIN DURATION = 1.00
ALTERNATE NO. = 1	STORM NO. = 2	MAIN TIME INCREMENT = .08 HO

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

*** WARNING REACH 172 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 170 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 70

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.25	503.49	(NULL
6.64	702.63	(NULL
9.96	62.85	(NULL
11.97	66.64	(NULL
16.21	43.87	(NULL
19.98	35.58	(NULL
23.93	18.55	(NULL

TIME(HRS)		FIRST HYDROGRAPH POINT =		.00 HOURS		TIME INCREMENT =	
4.98	DISCHG	.00	.00	.00	.00	.00	.00
5.81	DISCHG	43.86	125.69	249.45	385.06	480.91	502.39
6.64	DISCHG	702.55	675.30	616.06	544.90	474.75	411.17
7.47	DISCHG	208.78	188.23	171.29	157.71	147.10	138.85
8.30	DISCHG	117.52	113.78	110.32	106.00	100.41	94.02
9.13	DISCHG	69.74	67.51	65.90	64.77	64.00	63.48
9.96	DISCHG	62.85	62.84	62.45	61.15	59.22	57.28
10.79	DISCHG	44.43	41.64	39.28	37.52	36.94	38.53
11.62	DISCHG	57.80	61.39	63.75	65.53	66.61	66.12
12.45	DISCHG	54.08	52.99	52.81	52.77	52.56	52.45
13.28	DISCHG	45.07	42.60	40.42	38.64	37.24	36.20
14.11	DISCHG	34.11	34.24	34.57	34.96	35.34	35.80
14.94	DISCHG	38.97	39.43	39.80	40.09	40.31	40.49
15.77	DISCHG	41.67	42.15	42.61	43.12	43.62	43.86
16.60	DISCHG	42.17	41.13	39.98	38.87	37.89	37.08
17.43	DISCHG	35.24	35.13	35.06	35.02	35.00	34.99
18.26	DISCHG	35.06	35.08	35.11	35.13	35.15	35.18
19.09	DISCHG	35.31	35.33	35.36	35.38	35.41	35.43
19.92	DISCHG	35.56	35.58	35.51	35.15	34.39	33.51
20.75	DISCHG	27.24	25.44	23.83	22.40	21.10	20.03
21.58	DISCHG	18.18	18.30	18.38	18.43	18.47	18.42
22.41	DISCHG	17.64	17.67	17.87	18.11	18.27	18.38
23.24	DISCHG	17.87	17.78	17.71	17.74	17.93	18.18
24.07	DISCHG	18.26	17.53	16.28	14.81	13.42	12.09

RUNOFF VOLUME ABOVE BASEFLOW = .65 WATERSHED INCHES, 1510.57 CFS-HRS, 1

*** WARNING REACH 187 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING-MAIN TIME INCREMENT MAY BE TOO LARGE.

COMPUTED PEAK(27.75) AT EXCEEDS MAX. ADJACENT HYDROG
XSECTION 87

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

TIME(HRS)		FIRST HYDROGRAPH POINT =		.00 HOURS		TIME INCREMENT =	
4.98	DISCHG	.00	.00	.00	.00	.00	.00
5.81	DISCHG	7.71	16.89	25.40	26.00	10.28	4.83
6.64	DISCHG	2.34	2.09	2.05	2.05	2.06	1.94

7.47	DISCHG	1.27	1.32	1.49	1.55	1.57	1.58
8.30	DISCHG	.74	.73	.73	.74	.74	.74
9.13	DISCHG	.74	.75	.75	.75	.75	.75
9.96	DISCHG	.76	.72	.50	.41	.39	.38
10.79	DISCHG	.38	.38	.38	.45	.88	1.09
11.62	DISCHG	.67	.45	.40	.39	.39	.42
12.45	DISCHG	.79	.77	.55	.43	.40	.40
13.28	DISCHG	.40	.40	.40	.40	.40	.40
14.11	DISCHG	.45	.47	.48	.48	.48	.48
14.94	DISCHG	.49	.49	.49	.49	.49	.49
15.77	DISCHG	.57	.57	.57	.57	.49	.43
16.60	DISCHG	.41	.41	.41	.41	.41	.41
17.43	DISCHG	.41	.41	.41	.42	.42	.42
18.26	DISCHG	.42	.42	.42	.42	.42	.42
19.09	DISCHG	.42	.42	.42	.42	.42	.42
19.92	DISCHG	.42	.42	.36	.28	.26	.26
20.75	DISCHG	.17	.17	.17	.17	.20	.24
21.58	DISCHG	.23	.18	.17	.17	.17	.17
22.41	DISCHG	.26	.26	.23	.19	.17	.17
23.24	DISCHG	.25	.26	.26	.26	.23	.19
24.07	DISCHG	.13	.03	.01	.00		

*** WARNING REACH 186 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 63

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.91	794.97	(NULL
12.27	78.62	(NULL
16.47	54.01	(NULL
20.05	44.14	(NULL
24.03	22.63	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.98	DISCHG .00 .00	.00 .00	.00 .00
5.81	DISCHG 8.10 23.97	56.08 110.58	193.09 302.04
6.64	DISCHG 693.16 729.44	769.77 793.65	787.57 751.46
7.47	DISCHG 432.56 378.81	332.83 294.79	263.68 238.24
8.30	DISCHG 169.15 162.48	156.32 150.01	143.94 138.29
9.13	DISCHG 106.75 100.76	95.58 91.28	87.84 85.18
9.96	DISCHG 79.37 79.03	78.71 78.31	77.76 77.02
10.79	DISCHG 66.35 63.52	60.43 57.29	54.40 52.18
11.62	DISCHG 57.77 61.64	65.50 69.56	73.11 75.56

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

12.45	DISCHG	76.20	74.34	72.38	70.35	68.59	67.41
13.28	DISCHG	62.83	61.35	59.38	57.03	54.55	52.14
14.11	DISCHG	44.46	43.81	43.39	43.17	43.16	43.38
14.94	DISCHG	45.98	46.68	47.39	48.05	48.63	49.14
15.77	DISCHG	50.73	51.02	51.38	51.88	52.43	52.93
16.60	DISCHG	53.70	53.32	52.82	52.12	51.21	50.15
17.43	DISCHG	45.45	44.91	44.50	44.19	43.97	43.82
18.26	DISCHG	43.57	43.58	43.59	43.61	43.63	43.66

19.09	DISCHG	43.80	43.83	43.86	43.89	43.92	43.95
19.92	DISCHG	44.10	44.13	44.13	44.07	43.92	43.67
20.75	DISCHG	39.20	37.84	36.26	34.44	32.50	30.63
21.58	DISCHG	24.32	23.74	23.31	23.06	22.94	22.86
22.41	DISCHG	22.42	22.33	22.30	22.28	22.27	22.33
23.24	DISCHG	22.59	22.55	22.44	22.37	22.36	22.35
24.07	DISCHG	22.62	22.52	22.28	21.85	21.14	20.00

RUNOFF VOLUME ABOVE BASEFLOW = .69 WATERSHED INCHES, 1914.76 CFS-HRS, 1

*** WARNING REACH 164 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 159 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.67	945.14	(NULL
6.95	943.17	(NULL
12.49	102.98	(NULL
16.20	71.74	(NULL
19.99	59.52	(NULL
22.57	30.81	(NULL
23.59	30.81	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.
4.98	DISCHG	.00	.00	.00
5.81	DISCHG	146.60	286.80	456.52
6.64	DISCHG	944.15	940.56	937.15
7.47	DISCHG	651.90	583.40	520.07
8.30	DISCHG	248.13	231.84	218.75
9.13	DISCHG	152.18	145.16	138.52
9.96	DISCHG	110.76	109.76	108.60
10.79	DISCHG	89.08	86.10	83.01
11.62	DISCHG	86.68	88.25	88.93
12.45	DISCHG	102.84	102.87	101.91
13.28	DISCHG	82.64	81.06	79.38
14.11	DISCHG	62.52	61.48	60.88
14.94	DISCHG	62.53	63.19	63.89
15.77	DISCHG	69.00	69.73	70.37

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

16.60	DISCHG	70.88	70.49	69.99	69.40	68.70	67.85
17.43	DISCHG	62.67	61.83	61.12	60.55	60.09	59.74
18.26	DISCHG	59.01	58.98	58.97	58.97	58.98	59.00
19.09	DISCHG	59.15	59.18	59.21	59.25	59.28	59.32
19.92	DISCHG	59.49	59.52	59.46	59.08	58.31	57.37
20.75	DISCHG	51.55	49.77	47.97	46.10	44.16	42.27
21.58	DISCHG	35.07	33.98	32.91	31.95	31.21	30.68
22.41	DISCHG	30.64	30.75	30.81	30.73	30.48	30.15
23.24	DISCHG	29.94	30.27	30.54	30.71	30.81	30.78
24.07	DISCHG	29.64	29.18	28.28	27.16	26.02	24.84

RUNOFF VOLUME ABOVE BASEFLOW = .81 WATERSHED INCHES, 2829.41 CFS-HRS, 2

OPERATION REACH CROSS SECTION 151

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
7.10	933.43	(NULL
12.69	101.37	(NULL
16.47	71.27	(NULL
20.12	59.47	(NULL
23.76	30.64	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.
4.98	DISCHG .00 .00	.00 .00	.00 .00	.00
5.81	DISCHG 22.75 68.55	149.26 262.88	399.46 534.28	
6.64	DISCHG 848.22 883.69	904.72 916.71	925.39 931.78	
7.47	DISCHG 808.61 750.66	688.81 626.41	566.35 510.71	
8.30	DISCHG 316.68 291.33	269.33 250.63	234.79 221.17	
9.13	DISCHG 172.98 165.29	157.85 150.70	143.95 137.74	
9.96	DISCHG 116.85 114.60	112.81 111.25	109.57 107.59	
10.79	DISCHG 96.28 93.62	90.84 87.94	84.97 82.25	
11.62	DISCHG 82.00 83.73	85.40 86.70	87.83 89.12	
12.45	DISCHG 98.28 99.96	101.04 101.36	100.74 99.16	
13.28	DISCHG 87.85 85.92	84.12 82.37	80.55 78.59	
14.11	DISCHG 67.61 65.73	64.16 62.95	62.06 61.44	
14.94	DISCHG 61.39 61.81	62.32 62.90	63.54 64.20	
15.77	DISCHG 67.26 67.90	68.57 69.24	69.89 70.49	
16.60	DISCHG 71.21 71.09	70.87 70.54	70.12 69.59	
17.43	DISCHG 65.34 64.35	63.42 62.57	61.82 61.18	
18.26	DISCHG 59.41 59.26	59.16 59.09	59.05 59.02	
19.09	DISCHG 59.07 59.10	59.13 59.16	59.19 59.22	
19.92	DISCHG 59.40 59.43	59.47 59.46	59.32 58.95	
20.75	DISCHG 54.99 53.72	52.26 50.67	48.98 47.20	
21.58	DISCHG 38.80 37.42	36.15 34.95	33.84 32.87	
22.41	DISCHG 30.60 30.62	30.67 30.72	30.72 30.63	
23.24	DISCHG 29.83 29.87	30.02 30.21	30.40 30.55	
24.07	DISCHG 30.12 29.94	29.66 29.15	28.41 27.53	

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

RUNOFF VOLUME ABOVE BASEFLOW = .81 WATERSHED INCHES, 2824.54 CFS-HRS, 2

OPERATION REACH CROSS SECTION 152

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.26	366.77	(NULL
8.18	19.72	(NULL
10.09	9.31	(NULL
11.73	12.43	(NULL
12.73	8.64	(NULL
16.20	6.43	(NULL
20.09	4.75	(NULL
23.73	2.71	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .		
4.15	DISCHG	.00	.00	.00	.00	.00	.00
4.98	DISCHG	.08	.13	.20	.33	.74	1.50
5.81	DISCHG	39.20	99.04	173.11	246.86	313.25	362.02
6.64	DISCHG	134.32	102.83	79.95	62.83	50.51	42.15
7.47	DISCHG	23.42	21.16	19.56	18.52	18.15	18.35
8.30	DISCHG	18.81	16.97	14.92	13.19	11.88	10.97
9.13	DISCHG	9.42	9.36	9.33	9.31	9.30	9.29
9.96	DISCHG	9.30	9.30	9.30	9.26	8.88	8.09
10.79	DISCHG	5.15	4.97	4.85	4.78	4.73	4.79
11.62	DISCHG	11.60	12.37	12.26	11.08	9.50	8.09
12.45	DISCHG	7.12	7.76	8.27	8.62	8.56	7.97
13.28	DISCHG	5.20	5.01	4.89	4.82	4.77	4.74
14.11	DISCHG	4.71	4.71	4.77	4.91	5.10	5.26
14.94	DISCHG	5.61	5.63	5.64	5.64	5.65	5.65
15.77	DISCHG	5.72	5.86	6.05	6.21	6.34	6.43
16.60	DISCHG	5.25	5.07	4.95	4.87	4.82	4.78
17.43	DISCHG	4.74	4.74	4.73	4.73	4.73	4.74
18.26	DISCHG	4.74	4.74	4.74	4.74	4.74	4.74
19.09	DISCHG	4.74	4.74	4.74	4.74	4.75	4.75
19.92	DISCHG	4.75	4.75	4.75	4.75	4.68	4.43
20.75	DISCHG	3.07	2.85	2.61	2.40	2.24	2.12
21.58	DISCHG	2.57	2.67	2.70	2.63	2.47	2.32
22.41	DISCHG	2.28	2.43	2.57	2.66	2.70	2.63
23.24	DISCHG	2.06	2.12	2.27	2.43	2.56	2.66
24.07	DISCHG	2.20	2.10	1.99	1.72	1.34	.96

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES, 349.50 CFS-HRS,

OPERATION ADDHYD STRUCTURE 51

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.31	1259.07	(NULL
11.73	110.44	(NULL
12.66	120.55	(NULL
16.23	85.07	(NULL
19.99	70.48	(NULL
22.65	36.88	(NULL
23.68	36.74	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .		
4.15	DISCHG	.00	.00	.00	.00	.00	.00
4.98	DISCHG	.08	.13	.20	.33	.74	1.50
5.81	DISCHG	125.02	300.29	542.01	809.46	1049.32	1211.49
6.64	DISCHG	1088.38	1072.77	1056.06	1039.90	1028.34	1020.51
7.47	DISCHG	858.73	796.74	732.32	668.68	608.45	553.31
8.30	DISCHG	354.88	325.54	299.87	278.23	260.22	245.13
9.13	DISCHG	194.37	186.57	179.06	171.88	165.11	158.89
9.96	DISCHG	138.02	135.71	133.52	131.04	127.90	124.17
10.79	DISCHG	107.81	104.85	101.87	98.99	96.72	95.79

11.62	DISCHG	109.03	110.35	110.08	108.48	106.68	105.60
12.45	DISCHG	116.00	118.76	120.32	120.36	118.73	115.67
13.28	DISCHG	99.53	97.30	95.31	93.42	91.52	89.51
14.11	DISCHG	78.53	76.82	75.53	74.67	74.13	73.80
14.94	DISCHG	74.34	74.80	75.33	75.93	76.57	77.24
15.77	DISCHG	80.84	81.85	82.88	83.83	84.58	85.01
16.60	DISCHG	83.04	82.63	82.21	81.75	81.24	80.66
17.43	DISCHG	76.32	75.33	74.40	73.55	72.80	72.16
18.26	DISCHG	70.41	70.26	70.16	70.09	70.05	70.03
19.09	DISCHG	70.09	70.12	70.15	70.19	70.22	70.26
19.92	DISCHG	70.45	70.48	70.43	70.14	69.49	68.41
20.75	DISCHG	61.65	59.87	57.94	55.98	54.05	52.21
21.58	DISCHG	44.94	43.57	42.16	40.69	39.27	38.01
22.41	DISCHG	36.27	36.56	36.80	36.87	36.75	36.39
23.24	DISCHG	34.90	35.21	35.68	36.15	36.53	36.72
24.07	DISCHG	35.01	34.42	33.55	32.28	30.75	29.19

RUNOFF VOLUME ABOVE BASEFLOW = .90 WATERSHED INCHES, 3534.18 CFS-HRS, 2

OPERATION REACH CROSS SECTION 150

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.56	231.48	(NULL
11.96	11.71	(NULL
12.89	9.17	(NULL
16.36	7.21	(NULL
20.06	5.63	(NULL
23.92	2.99	(NULL

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.
4.98	DISCHG .00 .00 .00 .00	.00	.00	.00
5.81	DISCHG 1.60 6.35 17.94 39.81	73.23	115.41	
6.64	DISCHG 225.26 208.44 185.66 160.95	137.30	116.27	
7.47	DISCHG 52.85 46.03 40.40 35.79	32.08	29.19	
8.30	DISCHG 22.99 22.23 21.30 20.17	18.90	17.57	
9.13	DISCHG 12.68 12.18 11.79 11.50	11.28	11.12	
9.96	DISCHG 10.78 10.76 10.74 10.69	10.59	10.38	
10.79	DISCHG 7.94 7.43 6.99 6.62	6.34	6.18	
11.62	DISCHG 8.88 9.93 10.85 11.48	11.71	11.55	
12.45	DISCHG 8.77 8.63 8.69 8.87	9.06	9.17	
13.28	DISCHG 7.74 7.31 6.93 6.61	6.35	6.14	
14.11	DISCHG 5.65 5.62 5.61 5.62	5.67	5.75	
14.94	DISCHG 6.28 6.36 6.42 6.47	6.51	6.54	
15.77	DISCHG 6.65 6.69 6.76 6.85	6.97	7.08	
16.60	DISCHG 6.95 6.76 6.57 6.38	6.21	6.07	
17.43	DISCHG 5.70 5.67 5.65 5.64	5.62	5.62	
18.26	DISCHG 5.60 5.60 5.60 5.60	5.60	5.61	
19.09	DISCHG 5.61 5.62 5.62 5.62	5.62	5.62	
19.92	DISCHG 5.63 5.63 5.63 5.63	5.61	5.54	
20.75	DISCHG 4.55 4.29 4.03 3.78	3.54	3.32	
21.58	DISCHG 2.86 2.90 2.95 2.99	3.01	2.98	

22.41	DISCHG	2.69	2.70	2.75	2.82	2.89	2.95
23.24	DISCHG	2.78	2.72	2.69	2.70	2.75	2.82
24.07	DISCHG	2.93	2.85	2.74	2.60	2.41	2.18

RUNOFF VOLUME ABOVE BASEFLOW = 1.39 WATERSHED INCHES, 339.89 CFS-HRS,

OPERATION ADDHYD STRUCTURE 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.48	304.02	(NULL
11.87	15.75	(NULL
12.77	12.51	(NULL
16.26	9.85	(NULL
19.93	7.73	(NULL
23.83	4.06	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.98	DISCHG .00 .00 .00 .00 .00 .00		
5.81	DISCHG 19.88 42.50 77.49 123.98 177.31 228.17		
6.64	DISCHG 277.61 250.97 220.74 190.18 161.97 137.41		
7.47	DISCHG 64.11 56.20 49.76 44.63 40.63 37.61		
8.30	DISCHG 30.49 29.10 27.53 25.83 24.09 22.43		
9.13	DISCHG 16.85 16.31 15.89 15.58 15.35 15.17		
9.96	DISCHG 14.81 14.77 14.69 14.51 14.18 13.70		
10.79	DISCHG 10.25 9.66 9.17 8.79 8.60 8.68		

1

R20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

11.62	DISCHG	13.74	14.84	15.53	15.75	15.52	14.93
12.45	DISCHG	12.08	12.12	12.28	12.45	12.51	12.40
13.28	DISCHG	10.06	9.56	9.13	8.76	8.48	8.25
14.11	DISCHG	7.73	7.72	7.75	7.82	7.93	8.06
14.94	DISCHG	8.72	8.81	8.88	8.94	8.99	9.02
15.77	DISCHG	9.21	9.31	9.44	9.58	9.72	9.82
16.60	DISCHG	9.25	9.01	8.77	8.55	8.36	8.20
17.43	DISCHG	7.80	7.76	7.74	7.72	7.71	7.70
18.26	DISCHG	7.69	7.69	7.69	7.69	7.69	7.70
19.09	DISCHG	7.71	7.71	7.71	7.71	7.72	7.72
19.92	DISCHG	7.73	7.73	7.71	7.67	7.57	7.40
20.75	DISCHG	5.88	5.53	5.19	4.86	4.56	4.31
21.58	DISCHG	4.01	4.06	4.10	4.10	4.06	3.99
22.41	DISCHG	3.74	3.80	3.88	3.97	4.03	4.06
23.24	DISCHG	3.75	3.72	3.74	3.80	3.89	3.97
24.07	DISCHG	3.88	3.74	3.53	3.27	2.94	2.59

RUNOFF VOLUME ABOVE BASEFLOW = 1.44 WATERSHED INCHES, 473.12 CFS-HRS,

*** WARNING REACH 148 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 141 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 185 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED
 *** WARNING REACH 157 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 154 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.16	1322.20	(NULL
8.04	78.13	(NULL
9.93	37.41	(NULL
11.62	48.86	(NULL
12.61	34.28	(NULL
16.08	25.81	(NULL
19.90	19.21	(NULL
21.61	10.80	(NULL
22.61	10.81	(NULL
23.61	10.82	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.15 DISCHG	.00 .00 .00 .00	.00	.00
4.98 DISCHG	.44 .71 1.47 3.03	5.18	7.60
5.81 DISCHG	437.26 691.29 962.01 1200.83	1318.42	1271.41
6.64 DISCHG	387.03 299.25 236.57 192.82	162.93	142.61

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

7.47	DISCHG	82.72	76.94	73.83	73.05	73.92	75.52
8.30	DISCHG	65.46	58.14	51.75	46.86	43.36	41.03
9.13	DISCHG	37.56	37.44	37.38	37.35	37.33	37.33
9.96	DISCHG	37.40	37.28	36.43	34.32	31.32	28.10
10.79	DISCHG	19.83	19.42	19.16	19.21	20.83	24.89
11.62	DISCHG	48.86	47.01	42.47	36.85	31.61	27.54
12.45	DISCHG	31.73	33.59	34.28	33.32	31.03	28.14
13.28	DISCHG	20.03	19.61	19.35	19.19	19.10	19.04
14.11	DISCHG	19.13	19.51	20.09	20.75	21.35	21.83
14.94	DISCHG	22.72	22.76	22.79	22.81	22.82	22.83
15.77	DISCHG	23.92	24.59	25.20	25.67	25.79	25.33
16.60	DISCHG	20.35	19.88	19.59	19.40	19.28	19.21
17.43	DISCHG	19.12	19.12	19.13	19.13	19.13	19.14
18.26	DISCHG	19.15	19.15	19.16	19.16	19.16	19.17
19.09	DISCHG	19.18	19.18	19.19	19.19	19.19	19.20
19.92	DISCHG	19.21	19.20	19.02	18.42	17.35	16.03
20.75	DISCHG	11.17	10.30	9.53	8.94	8.58	8.57
21.58	DISCHG	10.77	10.74	10.39	9.84	9.26	8.78
22.41	DISCHG	9.98	10.47	10.78	10.76	10.42	9.87
23.24	DISCHG	8.84	9.39	9.97	10.47	10.78	10.78
24.07	DISCHG	8.32	7.54	6.36	4.95	3.58	2.45

RUNOFF VOLUME ABOVE BASEFLOW = 1.87 WATERSHED INCHES, 1351.26 CFS-HRS, 1

*** WARNING REACH 153 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 53

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.16	1421.00	(NULL
8.04	85.87	(NULL
9.93	41.17	(NULL
11.61	54.03	(NULL
12.60	37.90	(NULL
16.07	28.55	(NULL
19.91	21.27	(NULL
21.61	11.98	(NULL
22.60	12.00	(NULL
23.61	12.01	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =
4.15	DISCHG .00 .00 .00 .00	.00	.00
4.98	DISCHG .44 .71 1.47 3.03	5.18	7.60
5.81	DISCHG 448.68 721.80 1020.22 1287.22	1417.32	1361.26
6.64	DISCHG 410.30 318.40 252.63 206.65	175.43	154.20
7.47	DISCHG 89.86 83.82 80.67 80.07	81.21	83.05
8.30	DISCHG 71.18 63.09 56.19 51.00	47.32	44.89
9.13	DISCHG 41.27 41.16 41.10 41.07	41.06	41.07

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

9.96	DISCHG	41.16	41.02	40.02	37.58	34.16	30.58
10.79	DISCHG	21.78	21.35	21.08	21.16	23.09	27.81
11.62	DISCHG	54.00	51.62	46.29	39.97	34.26	29.94
12.45	DISCHG	35.26	37.23	37.88	36.64	33.96	30.72
13.28	DISCHG	22.04	21.60	21.33	21.16	21.06	21.01
14.11	DISCHG	21.12	21.57	22.24	22.98	23.64	24.15
14.94	DISCHG	25.10	25.14	25.17	25.19	25.20	25.22
15.77	DISCHG	26.50	27.25	27.92	28.42	28.51	27.95
16.60	DISCHG	22.43	21.93	21.62	21.43	21.31	21.24
17.43	DISCHG	21.15	21.15	21.15	21.16	21.16	21.16
18.26	DISCHG	21.19	21.19	21.19	21.20	21.20	21.21
19.09	DISCHG	21.23	21.23	21.23	21.24	21.24	21.25
19.92	DISCHG	21.27	21.26	21.05	20.34	19.09	17.59
20.75	DISCHG	12.28	11.30	10.46	9.83	9.46	9.49
21.58	DISCHG	11.96	11.89	11.46	10.83	10.19	9.67
22.41	DISCHG	11.13	11.65	11.97	11.92	11.50	10.87
23.24	DISCHG	9.84	10.47	11.12	11.65	11.98	11.94
24.07	DISCHG	9.17	8.28	6.92	5.32	3.81	2.59

RUNOFF VOLUME ABOVE BASEFLOW = 1.74 WATERSHED INCHES, 1450.79 CFS-HRS, 1

*** WARNING REACH 147 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 143 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 136 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 37

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.42	3056.74	(NULL

11.74	223.15	(NULL
12.75	209.04	(NULL
16.21	155.87	(NULL
19.97	128.11	(NULL
22.66	67.32	(NULL
23.73	66.51	(NULL

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .	
4.15	DISCHG	.00	.00	.00	.00	.00	.00
4.98	DISCHG	.09	.19	.32	.54	1.06	2.13
5.81	DISCHG	334.42	697.81	1199.07	1786.69	2311.42	2709.06
6.64	DISCHG	2719.15	2500.40	2290.39	2110.27	1963.14	1841.90
7.47	DISCHG	1423.87	1358.44	1292.17	1223.90	1153.83	1083.03
8.30	DISCHG	744.87	683.20	626.16	574.30	527.91	487.23
9.13	DISCHG	360.38	345.65	332.96	321.81	311.80	302.64
9.96	DISCHG	266.40	260.99	254.94	247.77	239.71	231.01
10.79	DISCHG	190.52	184.40	179.01	174.50	173.06	175.66

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

11.62	DISCHG	218.87	222.74	222.54	218.74	212.65	205.45
12.45	DISCHG	198.13	202.58	206.52	208.70	208.84	206.91
13.28	DISCHG	180.67	175.08	170.09	165.70	161.89	158.58
14.11	DISCHG	145.81	144.00	142.54	141.44	140.62	140.07
14.94	DISCHG	139.96	140.24	140.61	141.07	141.59	142.19
15.77	DISCHG	147.51	149.43	151.48	153.52	155.12	155.82
16.60	DISCHG	149.94	148.11	146.43	144.96	143.71	142.64
17.43	DISCHG	138.22	137.29	136.30	135.27	134.24	133.23
18.26	DISCHG	129.38	128.91	128.54	128.25	128.03	127.87
19.09	DISCHG	127.63	127.65	127.67	127.71	127.75	127.79
19.92	DISCHG	128.04	128.09	127.83	126.81	125.07	122.72
20.75	DISCHG	106.92	103.26	99.66	96.18	92.96	90.26
21.58	DISCHG	82.74	81.26	79.42	77.24	74.86	72.42
22.41	DISCHG	66.50	66.75	67.15	67.32	67.19	66.71
23.24	DISCHG	63.29	63.53	64.12	64.94	65.80	66.35
24.07	DISCHG	63.72	61.75	59.07	55.86	52.34	48.74

RUNOFF VOLUME ABOVE BASEFLOW = 1.09 WATERSHED INCHES, 7046.39 CFS-HRS, 5

*** WARNING REACH 128 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 127 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 184 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 125 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 120 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 183 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
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6.13	4806.10	(NULL
11.57	339.44	(NULL
12.54	299.97	(NULL
16.06	227.66	(NULL
19.96	185.98	(NULL
22.49	99.23	(NULL
23.56	96.64	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .		
4.15	DISCHG	.00	.00	.00	.01	.05	.12
4.98	DISCHG	1.20	1.65	3.05	5.94	10.74	17.18
5.81	DISCHG	1972.89	2949.45	3968.82	4729.98	4804.86	4686.17
6.64	DISCHG	3923.63	3614.68	3303.53	3011.86	2755.92	2535.91
7.47	DISCHG	1806.85	1720.05	1646.94	1579.32	1512.35	1444.62

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

8.30	DISCHG	1035.64	954.53	879.14	809.99	747.45	691.79
9.13	DISCHG	510.44	489.47	471.83	456.84	443.93	432.59
9.96	DISCHG	389.82	381.86	367.36	351.14	336.05	321.95
10.79	DISCHG	263.79	255.21	247.72	243.70	255.04	272.30
11.62	DISCHG	337.20	329.90	321.82	313.06	303.04	293.08
12.45	DISCHG	296.14	299.93	297.61	292.76	288.06	283.41
13.28	DISCHG	251.48	244.59	238.16	232.34	227.19	222.69
14.11	DISCHG	208.68	208.39	208.14	207.84	207.58	207.40
14.94	DISCHG	207.72	207.97	208.27	208.64	209.09	209.60
15.77	DISCHG	218.94	221.85	224.71	227.37	227.26	225.38
16.60	DISCHG	213.43	210.85	208.43	206.24	204.34	202.72
17.43	DISCHG	197.30	196.41	195.49	194.53	193.54	192.53
18.26	DISCHG	188.07	187.43	186.90	186.46	186.11	185.83
19.09	DISCHG	185.29	185.29	185.30	185.33	185.36	185.41
19.92	DISCHG	185.69	185.72	183.60	179.31	174.74	170.42
20.75	DISCHG	144.56	139.01	133.83	129.03	125.59	123.60
21.58	DISCHG	117.10	114.27	111.24	108.29	105.29	102.27
22.41	DISCHG	98.89	99.23	98.92	97.57	96.11	94.79
23.24	DISCHG	93.08	94.00	95.02	96.19	96.63	95.89
24.07	DISCHG	88.83	83.36	77.35	71.67	66.20	60.88

RUNOFF VOLUME ABOVE BASEFLOW = 1.25 WATERSHED INCHES, 10926.19 CFS-HRS, 9

*** WARNING REACH 115 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 114 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 106 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 107 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.19	6365.16	(NULL
11.64	403.43	(NULL
12.60	350.19	(NULL

16.13	264.27	(NULL
19.97	214.38	(NULL
22.56	115.86	(NULL
23.62	112.41	(NULL

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.
4.15	DISCHG	.00	.00	.00
4.98	DISCHG	1.00	1.42	2.11
5.81	DISCHG	1479.90	2721.87	4096.96
6.64	DISCHG	4680.04	4386.01	4059.92
7.47	DISCHG	2115.58	1994.88	1895.20

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

8.30	DISCHG	1268.77	1170.37	1079.59	996.55	920.95	852.59
9.13	DISCHG	615.47	586.51	562.21	541.79	524.55	509.83
9.96	DISCHG	458.41	450.51	440.37	423.12	402.19	382.28
10.79	DISCHG	310.03	299.42	289.96	282.11	280.71	295.79
11.62	DISCHG	402.70	399.30	385.06	369.49	355.52	342.94
12.45	DISCHG	343.84	347.86	350.08	345.43	336.31	327.17
13.28	DISCHG	292.06	284.94	277.92	271.23	265.03	259.44
14.11	DISCHG	240.49	239.67	240.09	240.68	241.02	241.15
14.94	DISCHG	241.39	241.57	241.79	242.08	242.42	242.82
15.77	DISCHG	251.01	254.90	258.51	261.78	264.16	263.48
16.60	DISCHG	246.96	244.14	241.41	238.84	236.48	234.38
17.43	DISCHG	227.48	226.53	225.61	224.70	223.76	222.80
18.26	DISCHG	218.03	217.24	216.54	215.94	215.44	215.03
19.09	DISCHG	214.04	213.99	213.97	213.97	213.99	214.02
19.92	DISCHG	214.30	214.35	213.97	211.04	205.33	198.94
20.75	DISCHG	169.69	162.51	155.92	149.98	144.81	141.33
21.58	DISCHG	136.24	134.17	130.69	126.78	123.08	119.63
22.41	DISCHG	115.24	115.58	115.83	115.11	113.05	110.63
23.24	DISCHG	106.05	107.83	109.48	110.93	112.14	112.29
24.07	DISCHG	104.12	100.40	93.62	85.76	78.37	71.73

RUNOFF VOLUME ABOVE BASEFLOW = 1.30 WATERSHED INCHES, 12823.07 CFS-HRS, 10

*** WARNING REACH 104 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 109 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

*** WARNING REACH 108 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER RED

OPERATION ADDHYD STRUCTURE 99

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVA
6.16	7399.01	(NULL
11.62	438.20	(NULL
12.59	375.06	(NULL
16.10	282.05	(NULL
19.97	227.59	(NULL
22.55	123.68	(NULL
23.60	120.00	(NULL

TIME(HRS)		FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .	
4.15	DISCHG	.00	.00	.00	.00	.01	.03
4.98	DISCHG	1.00	1.42	2.12	3.96	7.71	13.84
5.81	DISCHG	1969.31	3475.38	5076.04	6555.41	7368.62	7074.31
6.64	DISCHG	4817.24	4498.57	4155.36	3814.91	3494.84	3206.62
7.47	DISCHG	2163.01	2041.37	1942.46	1864.28	1796.60	1731.56
8.30	DISCHG	1303.68	1200.48	1107.26	1023.07	946.92	878.31
9.13	DISCHG	640.95	612.00	587.71	567.31	550.07	535.37

1

TR20 XEQ 10/ 4/95	10:29	UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83		24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

9.96	DISCHG	484.01	475.97	464.49	443.61	419.34	397.29
10.79	DISCHG	322.94	312.30	302.83	295.24	296.31	318.59
11.62	DISCHG	438.19	427.95	406.94	386.92	370.62	357.04
12.45	DISCHG	368.63	373.11	374.48	366.47	353.91	342.48
13.28	DISCHG	305.12	297.96	290.93	284.22	278.02	272.43
14.11	DISCHG	253.70	253.56	254.70	255.79	256.40	256.65
14.94	DISCHG	257.03	257.21	257.44	257.72	258.07	258.48
15.77	DISCHG	268.26	272.66	276.55	279.94	282.05	280.11
16.60	DISCHG	260.18	257.30	254.55	251.96	249.59	247.49
17.43	DISCHG	240.60	239.65	238.73	237.82	236.89	235.93
18.26	DISCHG	231.17	230.39	229.69	229.09	228.59	228.18
19.09	DISCHG	227.21	227.16	227.14	227.14	227.16	227.20
19.92	DISCHG	227.49	227.53	226.92	222.89	215.64	208.11
20.75	DISCHG	176.22	168.45	161.52	155.42	150.28	147.29
21.58	DISCHG	144.00	141.44	137.20	132.71	128.68	125.07
22.41	DISCHG	122.85	123.36	123.60	122.42	119.61	116.60
23.24	DISCHG	112.71	115.09	117.09	118.71	119.92	119.65
24.07	DISCHG	109.35	104.68	96.31	87.21	79.08	72.07

RUNOFF VOLUME ABOVE BASEFLOW = 1.33 WATERSHED INCHES, 13716.86 CFS-HRS, 11

EXECUTIVE CONTROL OPERATION ENDCMP

+

COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL OPERATION ENDJOB

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TR20 XEQ 10/ 4/95	10:29	UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83		24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
 (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
 A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE	STANDARD CONTROL	DRAINAGE	RAIN TABLE	ANTEC MOIST	MAIN TIME	PRECIPITATION -----
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ID	OPERATION	AREA (SQ MI)	#	COND	INCREM (HR)	BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	1					
XSECTION 82	RUNOFF	.19	1	2	.08	.0	4.40	24.00
XSECTION 174	REACH	.19	1	2	.08	.0	4.40	24.00
XSECTION 74	RUNOFF	.18	1	2	.08	.0	4.40	24.00
STRUCTURE 74	ADDHYD	.37	1	2	.08	.0	4.40	24.00
XSECTION 173	REACH	.37	1	2	.08	.0	4.40	24.00
XSECTION 75	RUNOFF	.12	1	2	.08	.0	4.40	24.00
STRUCTURE 75	ADDHYD	.49	1	2	.08	.0	4.40	24.00
XSECTION 73	RUNOFF	.12	1	2	.08	.0	4.40	24.00
STRUCTURE 75	ADDHYD	.61	1	2	.08	.0	4.40	24.00
XSECTION 81	RUNOFF	.39	1	2	.08	.0	4.40	24.00
XSECTION 175	REACH	.39	1	2	.08	.0	4.40	24.00
STRUCTURE 75	ADDHYD	1.00	1	2	.08	.0	4.40	24.00
XSECTION 80	RUNOFF	.22	1	2	.08	.0	4.40	24.00
XSECTION 176	REACH	.22	1	2	.08	.0	4.40	24.00
STRUCTURE 75	ADDHYD	1.22	1	2	.08	.0	4.40	24.00
XSECTION 76	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 75	ADDHYD	1.39	1	2	.08	.0	4.40	24.00
XSECTION 172	REACH	1.39	1	2	.08	.0	4.40	24.00
XSECTION 88	RUNOFF	.10	1	2	.08	.0	4.40	24.00
STRUCTURE 77	ADDHYD	1.49	1	2	.08	.0	4.40	24.00
XSECTION 77	RUNOFF	.25	1	2	.08	.0	4.40	24.00
STRUCTURE 77	ADDHYD	1.74	1	2	.08	.0	4.40	24.00
XSECTION 79	RUNOFF	.29	1	2	.08	.0	4.40	24.00
XSECTION 178	REACH	.29	1	2	.08	.0	4.40	24.00
XSECTION 78	RUNOFF	.88	1	2	.08	.0	4.40	24.00
STRUCTURE 78	ADDHYD	1.17	1	2	.08	.0	4.40	24.00
XSECTION 177	REACH	1.17	1	2	.08	.0	4.40	24.00
STRUCTURE 77	ADDHYD	2.91	1	2	.08	.0	4.40	24.00
XSECTION 171	REACH	2.91	1	2	.08	.0	4.40	24.00
XSECTION 71	RUNOFF	.36	1	2	.08	.0	4.40	24.00
STRUCTURE 71	ADDHYD	3.27	1	2	.08	.0	4.40	24.00
XSECTION 170	REACH	3.27	1	2	.08	.0	4.40	24.00

1

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM	PRECIPITATION -----		
						BEGIN	AMOUNT	DURATION

		(SQ MI)			(HR)	(HR)	(IN)	(HR)
ALTERNATE	1	STORM	1					
XSECTION 70	RUNOFF	.31	1	2	.08	.0	4.40	24.00
STRUCTURE 70	ADDHYD	3.58	1	2	.08	.0	4.40	24.00
XSECTION 187	REACH	3.58	1	2	.08	.0	4.40	24.00
XSECTION 87	RUNOFF	.04	1	2	.08	.0	4.40	24.00
STRUCTURE 87	ADDHYD	3.62	1	2	.08	.0	4.40	24.00
XSECTION 72	RUNOFF	.25	1	2	.08	.0	4.40	24.00
XSECTION 169	REACH	.25	1	2	.08	.0	4.40	24.00
XSECTION 69	RUNOFF	.25	1	2	.08	.0	4.40	24.00
STRUCTURE 69	ADDHYD	.50	1	2	.08	.0	4.40	24.00
XSECTION 186	REACH	.50	1	2	.08	.0	4.40	24.00
XSECTION 86	RUNOFF	.05	1	2	.08	.0	4.40	24.00
STRUCTURE 87	ADDHYD	.55	1	2	.08	.0	4.40	24.00
STRUCTURE 87	ADDHYD	4.17	1	2	.08	.0	4.40	24.00
XSECTION 163	REACH	4.17	1	2	.08	.0	4.40	24.00
XSECTION 63	RUNOFF	.16	1	2	.08	.0	4.40	24.00
STRUCTURE 63	ADDHYD	4.33	1	2	.08	.0	4.40	24.00
XSECTION 160	REACH	4.33	1	2	.08	.0	4.40	24.00
XSECTION 60	RUNOFF	.15	1	2	.08	.0	4.40	24.00
STRUCTURE 60	ADDHYD	4.48	1	2	.08	.0	4.40	24.00
XSECTION 59	RUNOFF	.16	1	2	.08	.0	4.40	24.00
STRUCTURE 60	ADDHYD	4.64	1	2	.08	.0	4.40	24.00
XSECTION 68	RUNOFF	.22	1	2	.08	.0	4.40	24.00
XSECTION 167	REACH	.22	1	2	.08	.0	4.40	24.00
XSECTION 67	RUNOFF	.27	1	2	.08	.0	4.40	24.00
STRUCTURE 67	ADDHYD	.49	1	2	.08	.0	4.40	24.00
XSECTION 164	REACH	.49	1	2	.08	.0	4.40	24.00
XSECTION 64	RUNOFF	.25	1	2	.08	.0	4.40	24.00
STRUCTURE 64	ADDHYD	.74	1	2	.08	.0	4.40	24.00
XSECTION 159	REACH	.74	1	2	.08	.0	4.40	24.00
STRUCTURE 60	ADDHYD	5.38	1	2	.08	.0	4.40	24.00
XSECTION 151	REACH	5.38	1	2	.08	.0	4.40	24.00
XSECTION 51	RUNOFF	.15	1	2	.08	.0	4.40	24.00
STRUCTURE 51	ADDHYD	5.53	1	2	.08	.0	4.40	24.00
XSECTION 49	RUNOFF	.10	1	2	.08	.0	4.40	24.00
STRUCTURE 51	ADDHYD	5.63	1	2	.08	.0	4.40	24.00
XSECTION 52	RUNOFF	.19	1	2	.08	.0	4.40	24.00

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	1					
+								
STRUCTURE 51	ADDHYD	5.82	1	2	.08	.0	4.40	24.00
XSECTION 65	RUNOFF	.10	1	2	.08	.0	4.40	24.00
XSECTION 158	REACH	.10	1	2	.08	.0	4.40	24.00
XSECTION 58	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 58	ADDHYD	.27	1	2	.08	.0	4.40	24.00
XSECTION 152	REACH	.27	1	2	.08	.0	4.40	24.00
STRUCTURE 51	ADDHYD	6.09	1	2	.08	.0	4.40	24.00
XSECTION 62	RUNOFF	.25	1	2	.08	.0	4.40	24.00
XSECTION 161	REACH	.25	1	2	.08	.0	4.40	24.00
XSECTION 61	RUNOFF	.13	1	2	.08	.0	4.40	24.00
STRUCTURE 61	ADDHYD	.38	1	2	.08	.0	4.40	24.00
XSECTION 150	REACH	.38	1	2	.08	.0	4.40	24.00
XSECTION 50	RUNOFF	.13	1	2	.08	.0	4.40	24.00
STRUCTURE 50	ADDHYD	.51	1	2	.08	.0	4.40	24.00
XSECTION 149	REACH	.51	1	2	.08	.0	4.40	24.00
STRUCTURE 51	ADDHYD	6.60	1	2	.08	.0	4.40	24.00
XSECTION 148	REACH	6.60	1	2	.08	.0	4.40	24.00
XSECTION 48	RUNOFF	.15	1	2	.08	.0	4.40	24.00
STRUCTURE 48	ADDHYD	6.75	1	2	.08	.0	4.40	24.00
XSECTION 141	REACH	6.75	1	2	.08	.0	4.40	24.00
XSECTION 40	RUNOFF	.30	1	2	.08	.0	4.40	24.00
STRUCTURE 41	ADDHYD	7.05	1	2	.08	.0	4.40	24.00
XSECTION 41	RUNOFF	.08	1	2	.08	.0	4.40	24.00
STRUCTURE 41	ADDHYD	7.13	1	2	.08	.0	4.40	24.00
XSECTION 185	REACH	7.13	1	2	.08	.0	4.40	24.00
XSECTION 85	RUNOFF	.05	1	2	.08	.0	4.40	24.00
STRUCTURE 85	ADDHYD	7.18	1	2	.08	.0	4.40	24.00
XSECTION 39	RUNOFF	.15	1	2	.08	.0	4.40	24.00
STRUCTURE 85	ADDHYD	7.33	1	2	.08	.0	4.40	24.00
XSECTION 137	REACH	7.33	1	2	.08	.0	4.40	24.00
XSECTION 36	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 37	ADDHYD	7.50	1	2	.08	.0	4.40	24.00
XSECTION 37	RUNOFF	.12	1	2	.08	.0	4.40	24.00
STRUCTURE 37	ADDHYD	7.62	1	2	.08	.0	4.40	24.00
XSECTION 66	RUNOFF	.31	1	2	.08	.0	4.40	24.00
XSECTION 157	REACH	.31	1	2	.08	.0	4.40	24.00

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REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTION
 (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
 A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	1					
+								
XSECTION 57	RUNOFF	.16	1	2	.08	.0	4.40	24.00
STRUCTURE 57	ADDHYD	.47	1	2	.08	.0	4.40	24.00
XSECTION 154	REACH	.47	1	2	.08	.0	4.40	24.00
XSECTION 55	RUNOFF	.25	1	2	.08	.0	4.40	24.00
STRUCTURE 54	ADDHYD	.72	1	2	.08	.0	4.40	24.00
XSECTION 56	RUNOFF	.15	1	2	.08	.0	4.40	24.00
XSECTION 155	REACH	.15	1	2	.08	.0	4.40	24.00
STRUCTURE 54	ADDHYD	.87	1	2	.08	.0	4.40	24.00
XSECTION 54	RUNOFF	.25	1	2	.08	.0	4.40	24.00
STRUCTURE 54	ADDHYD	1.12	1	2	.08	.0	4.40	24.00
XSECTION 153	REACH	1.12	1	2	.08	.0	4.40	24.00
XSECTION 53	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 53	ADDHYD	1.29	1	2	.08	.0	4.40	24.00
XSECTION 147	REACH	1.29	1	2	.08	.0	4.40	24.00
XSECTION 47	RUNOFF	.26	1	2	.08	.0	4.40	24.00
STRUCTURE 47	ADDHYD	1.55	1	2	.08	.0	4.40	24.00
XSECTION 142	REACH	1.55	1	2	.08	.0	4.40	24.00
XSECTION 42	RUNOFF	.20	1	2	.08	.0	4.40	24.00
STRUCTURE 43	ADDHYD	1.75	1	2	.08	.0	4.40	24.00
XSECTION 43	RUNOFF	.14	1	2	.08	.0	4.40	24.00
STRUCTURE 43	ADDHYD	1.89	1	2	.08	.0	4.40	24.00
XSECTION 45	RUNOFF	.24	1	2	.08	.0	4.40	24.00
XSECTION 46	RUNOFF	.23	1	2	.08	.0	4.40	24.00
STRUCTURE 45	ADDHYD	.47	1	2	.08	.0	4.40	24.00
XSECTION 143	REACH	.47	1	2	.08	.0	4.40	24.00
STRUCTURE 43	ADDHYD	2.36	1	2	.08	.0	4.40	24.00
XSECTION 136	REACH	2.36	1	2	.08	.0	4.40	24.00
STRUCTURE 37	ADDHYD	9.98	1	2	.08	.0	4.40	24.00
XSECTION 129	REACH	9.98	1	2	.08	.0	4.40	24.00
XSECTION 27	RUNOFF	.16	1	2	.08	.0	4.40	24.00
STRUCTURE 29	ADDHYD	10.14	1	2	.08	.0	4.40	24.00
XSECTION 38	RUNOFF	.32	1	2	.08	.0	4.40	24.00
XSECTION 128	REACH	.32	1	2	.08	.0	4.40	24.00
XSECTION 28	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 28	ADDHYD	.49	1	2	.08	.0	4.40	24.00
XSECTION 127	REACH	.49	1	2	.08	.0	4.40	24.00

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REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	1					
+								
STRUCTURE 29	ADDHYD	10.63	1	2	.08	.0	4.40	24.00
XSECTION 29	RUNOFF	.23	1	2	.08	.0	4.40	24.00
XSECTION 29	ADDHYD	10.86	1	2	.08	.0	4.40	24.00
XSECTION 184	REACH	10.86	1	2	.08	.0	4.40	24.00
XSECTION 84	RUNOFF	.04	1	2	.08	.0	4.40	24.00
STRUCTURE 30	ADDHYD	10.90	1	2	.08	.0	4.40	24.00
XSECTION 30	RUNOFF	.10	1	2	.08	.0	4.40	24.00
STRUCTURE 30	ADDHYD	11.00	1	2	.08	.0	4.40	24.00
XSECTION 31	RUNOFF	.21	1	2	.08	.0	4.40	24.00
STRUCTURE 30	ADDHYD	11.21	1	2	.08	.0	4.40	24.00
XSECTION 44	RUNOFF	.17	1	2	.08	.0	4.40	24.00
XSECTION 135	REACH	.17	1	2	.08	.0	4.40	24.00
XSECTION 35	RUNOFF	.12	1	2	.08	.0	4.40	24.00
STRUCTURE 35	ADDHYD	.29	1	2	.08	.0	4.40	24.00
XSECTION 34	RUNOFF	.29	1	2	.08	.0	4.40	24.00
STRUCTURE 35	ADDHYD	.58	1	2	.08	.0	4.40	24.00
XSECTION 130	REACH	.58	1	2	.08	.0	4.40	24.00
STRUCTURE 30	ADDHYD	11.79	1	2	.08	.0	4.40	24.00
XSECTION 32	RUNOFF	.11	1	2	.08	.0	4.40	24.00
XSECTION 33	RUNOFF	.29	1	2	.08	.0	4.40	24.00
STRUCTURE 33	ADDHYD	.40	1	2	.08	.0	4.40	24.00
XSECTION 131	REACH	.40	1	2	.08	.0	4.40	24.00
STRUCTURE 30	ADDHYD	12.19	1	2	.08	.0	4.40	24.00
XSECTION 125	REACH	12.19	1	2	.08	.0	4.40	24.00
XSECTION 26	RUNOFF	.19	1	2	.08	.0	4.40	24.00
STRUCTURE 25	ADDHYD	12.38	1	2	.08	.0	4.40	24.00
XSECTION 25	RUNOFF	.04	1	2	.08	.0	4.40	24.00
STRUCTURE 25	ADDHYD	12.42	1	2	.08	.0	4.40	24.00
XSECTION 24	RUNOFF	.19	1	2	.08	.0	4.40	24.00
STRUCTURE 25	ADDHYD	12.61	1	2	.08	.0	4.40	24.00
XSECTION 120	REACH	12.61	1	2	.08	.0	4.40	24.00
XSECTION 22	RUNOFF	.13	1	2	.08	.0	4.40	24.00
STRUCTURE 20	ADDHYD	12.74	1	2	.08	.0	4.40	24.00
XSECTION 20	RUNOFF	.09	1	2	.08	.0	4.40	24.00
STRUCTURE 20	ADDHYD	12.83	1	2	.08	.0	4.40	24.00
XSECTION 21	RUNOFF	.12	1	2	.08	.0	4.40	24.00

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REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	1					
+								
STRUCTURE 20	ADDHYD	12.95	1	2	.08	.0	4.40	24.00
XSECTION 19	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 20	ADDHYD	13.12	1	2	.08	.0	4.40	24.00
XSECTION 83	RUNOFF	.11	1	2	.08	.0	4.40	24.00
STRUCTURE 20	ADDHYD	13.23	1	2	.08	.0	4.40	24.00
XSECTION 23	RUNOFF	.28	1	2	.08	.0	4.40	24.00
XSECTION 183	REACH	.28	1	2	.08	.0	4.40	24.00
STRUCTURE 20	ADDHYD	13.51	1	2	.08	.0	4.40	24.00
XSECTION 113	REACH	13.51	1	2	.08	.0	4.40	24.00
XSECTION 13	RUNOFF	.24	1	2	.08	.0	4.40	24.00
STRUCTURE 13	ADDHYD	13.75	1	2	.08	.0	4.40	24.00
XSECTION 14	RUNOFF	.07	1	2	.08	.0	4.40	24.00
STRUCTURE 13	ADDHYD	13.82	1	2	.08	.0	4.40	24.00
XSECTION 15	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 13	ADDHYD	13.99	1	2	.08	.0	4.40	24.00
XSECTION 16	RUNOFF	.21	1	2	.08	.0	4.40	24.00
XSECTION 115	REACH	.21	1	2	.08	.0	4.40	24.00
STRUCTURE 13	ADDHYD	14.20	1	2	.08	.0	4.40	24.00
XSECTION 18	RUNOFF	.13	1	2	.08	.0	4.40	24.00
XSECTION 17	RUNOFF	.17	1	2	.08	.0	4.40	24.00
STRUCTURE 18	ADDHYD	.30	1	2	.08	.0	4.40	24.00
XSECTION 114	REACH	.30	1	2	.08	.0	4.40	24.00
STRUCTURE 13	ADDHYD	14.50	1	2	.08	.0	4.40	24.00
XSECTION 106	REACH	14.50	1	2	.08	.0	4.40	24.00
XSECTION 6	RUNOFF	.13	1	2	.08	.0	4.40	24.00
STRUCTURE 6	ADDHYD	14.63	1	2	.08	.0	4.40	24.00
XSECTION 5	RUNOFF	.15	1	2	.08	.0	4.40	24.00
STRUCTURE 6	ADDHYD	14.78	1	2	.08	.0	4.40	24.00
XSECTION 7	RUNOFF	.19	1	2	.08	.0	4.40	24.00
STRUCTURE 6	ADDHYD	14.97	1	2	.08	.0	4.40	24.00
XSECTION 11	RUNOFF	.16	1	2	.08	.0	4.40	24.00
XSECTION 12	RUNOFF	.13	1	2	.08	.0	4.40	24.00
STRUCTURE 11	ADDHYD	.29	1	2	.08	.0	4.40	24.00

XSECTION 107	REACH	.29	1	2	.08	.0	4.40	24.00
STRUCTURE 6	ADDHYD	15.26	1	2	.08	.0	4.40	24.00
XSECTION 104	REACH	15.26	1	2	.08	.0	4.40	24.00

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION ----- BEGIN AMOUNT DURATION (HR) (IN) (HR)		
ALTERNATE 1 STORM 1								
+								
XSECTION 4	RUNOFF	.19	1	2	.08	.0	4.40	24.00
STRUCTURE 4	ADDHYD	15.45	1	2	.08	.0	4.40	24.00
XSECTION 8	RUNOFF	.20	1	2	.08	.0	4.40	24.00
STRUCTURE 8	ADDHYD	15.65	1	2	.08	.0	4.40	24.00
XSECTION 10	RUNOFF	.14	1	2	.08	.0	4.40	24.00
XSECTION 109	REACH	.14	1	2	.08	.0	4.40	24.00
XSECTION 9	RUNOFF	.25	1	2	.08	.0	4.40	24.00
STRUCTURE 9	ADDHYD	.39	1	2	.08	.0	4.40	24.00
XSECTION 108	REACH	.39	1	2	.08	.0	4.40	24.00
STRUCTURE 99	ADDHYD	16.04	1	2	.08	.0	4.40	24.00
ALTERNATE 1 STORM 2								
+								
XSECTION 82	RUNOFF	.19	1	2	.08	.0	3.00	24.00
XSECTION 174	REACH	.19	1	2	.08	.0	3.00	24.00
XSECTION 74	RUNOFF	.18	1	2	.08	.0	3.00	24.00
STRUCTURE 74	ADDHYD	.37	1	2	.08	.0	3.00	24.00
XSECTION 173	REACH	.37	1	2	.08	.0	3.00	24.00
XSECTION 75	RUNOFF	.12	1	2	.08	.0	3.00	24.00
STRUCTURE 75	ADDHYD	.49	1	2	.08	.0	3.00	24.00
XSECTION 73	RUNOFF	.12	1	2	.08	.0	3.00	24.00
STRUCTURE 75	ADDHYD	.61	1	2	.08	.0	3.00	24.00
XSECTION 81	RUNOFF	.39	1	2	.08	.0	3.00	24.00
XSECTION 175	REACH	.39	1	2	.08	.0	3.00	24.00
STRUCTURE 75	ADDHYD	1.00	1	2	.08	.0	3.00	24.00
XSECTION 80	RUNOFF	.22	1	2	.08	.0	3.00	24.00
XSECTION 176	REACH	.22	1	2	.08	.0	3.00	24.00
TRUCTURE 75	ADDHYD	1.22	1	2	.08	.0	3.00	24.00
XSECTION 76	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 75	ADDHYD	1.39	1	2	.08	.0	3.00	24.00
XSECTION 172	REACH	1.39	1	2	.08	.0	3.00	24.00

XSECTION	88	RUNOFF	.10	1	2	.08	.0	3.00	24.00
STRUCTURE	77	ADDHYD	1.49	1	2	.08	.0	3.00	24.00
XSECTION	77	RUNOFF	.25	1	2	.08	.0	3.00	24.00
STRUCTURE	77	ADDHYD	1.74	1	2	.08	.0	3.00	24.00
XSECTION	79	RUNOFF	.29	1	2	.08	.0	3.00	24.00
XSECTION	178	REACH	.29	1	2	.08	.0	3.00	24.00
XSECTION	78	RUNOFF	.88	1	2	.08	.0	3.00	24.00

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION ----- BEGIN AMOUNT DURATION (HR) (IN) (HR)		
ALTERNATE	1	STORM	2					
+								
STRUCTURE 78	ADDHYD	1.17	1	2	.08	.0	3.00	24.00
XSECTION 177	REACH	1.17	1	2	.08	.0	3.00	24.00
STRUCTURE 77	ADDHYD	2.91	1	2	.08	.0	3.00	24.00
XSECTION 171	REACH	2.91	1	2	.08	.0	3.00	24.00
XSECTION 71	RUNOFF	.36	1	2	.08	.0	3.00	24.00
STRUCTURE 71	ADDHYD	3.27	1	2	.08	.0	3.00	24.00
XSECTION 170	REACH	3.27	1	2	.08	.0	3.00	24.00
XSECTION 70	RUNOFF	.31	1	2	.08	.0	3.00	24.00
STRUCTURE 70	ADDHYD	3.58	1	2	.08	.0	3.00	24.00
XSECTION 187	REACH	3.58	1	2	.08	.0	3.00	24.00
XSECTION 87	RUNOFF	.04	1	2	.08	.0	3.00	24.00
STRUCTURE 87	ADDHYD	3.62	1	2	.08	.0	3.00	24.00
XSECTION 72	RUNOFF	.25	1	2	.08	.0	3.00	24.00
XSECTION 169	REACH	.25	1	2	.08	.0	3.00	24.00
XSECTION 69	RUNOFF	.25	1	2	.08	.0	3.00	24.00
STRUCTURE 69	ADDHYD	.50	1	2	.08	.0	3.00	24.00
XSECTION 186	REACH	.50	1	2	.08	.0	3.00	24.00
XSECTION 86	RUNOFF	.05	1	2	.08	.0	3.00	24.00
STRUCTURE 87	ADDHYD	.55	1	2	.08	.0	3.00	24.00
STRUCTURE 87	ADDHYD	4.17	1	2	.08	.0	3.00	24.00
XSECTION 163	REACH	4.17	1	2	.08	.0	3.00	24.00
XSECTION 63	RUNOFF	.16	1	2	.08	.0	3.00	24.00
STRUCTURE 63	ADDHYD	4.33	1	2	.08	.0	3.00	24.00
XSECTION 160	REACH	4.33	1	2	.08	.0	3.00	24.00
XSECTION 60	RUNOFF	.15	1	2	.08	.0	3.00	24.00
STRUCTURE 60	ADDHYD	4.48	1	2	.08	.0	3.00	24.00

XSECTION	59	RUNOFF	.16	1	2	.08	.0	3.00	24.00
STRUCTURE	60	ADDHYD	4.64	1	2	.08	.0	3.00	24.00
XSECTION	68	RUNOFF	.22	1	2	.08	.0	3.00	24.00
XSECTION	167	REACH	.22	1	2	.08	.0	3.00	24.00
XSECTION	67	RUNOFF	.27	1	2	.08	.0	3.00	24.00
STRUCTURE	67	ADDHYD	.49	1	2	.08	.0	3.00	24.00
XSECTION	164	REACH	.49	1	2	.08	.0	3.00	24.00
XSECTION	64	RUNOFF	.25	1	2	.08	.0	3.00	24.00
STRUCTURE	64	ADDHYD	.74	1	2	.08	.0	3.00	24.00
XSECTION	159	REACH	.74	1	2	.08	.0	3.00	24.00

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION ----- BEGIN AMOUNT DURATION (HR) (IN) (HR)		
ALTERNATE	1	STORM	2					
+								
STRUCTURE 60	ADDHYD	5.38	1	2	.08	.0	3.00	24.00
XSECTION 151	REACH	5.38	1	2	.08	.0	3.00	24.00
XSECTION 51	RUNOFF	.15	1	2	.08	.0	3.00	24.00
STRUCTURE 51	ADDHYD	5.53	1	2	.08	.0	3.00	24.00
XSECTION 49	RUNOFF	.10	1	2	.08	.0	3.00	24.00
STRUCTURE 51	ADDHYD	5.63	1	2	.08	.0	3.00	24.00
XSECTION 52	RUNOFF	.19	1	2	.08	.0	3.00	24.00
STRUCTURE 51	ADDHYD	5.82	1	2	.08	.0	3.00	24.00
XSECTION 65	RUNOFF	.10	1	2	.08	.0	3.00	24.00
XSECTION 158	REACH	.10	1	2	.08	.0	3.00	24.00
XSECTION 58	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 58	ADDHYD	.27	1	2	.08	.0	3.00	24.00
XSECTION 152	REACH	.27	1	2	.08	.0	3.00	24.00
STRUCTURE 51	ADDHYD	6.09	1	2	.08	.0	3.00	24.00
XSECTION 62	RUNOFF	.25	1	2	.08	.0	3.00	24.00
XSECTION 161	REACH	.25	1	2	.08	.0	3.00	24.00
XSECTION 61	RUNOFF	.13	1	2	.08	.0	3.00	24.00
STRUCTURE 61	ADDHYD	.38	1	2	.08	.0	3.00	24.00
XSECTION 150	REACH	.38	1	2	.08	.0	3.00	24.00
SECTION 50	RUNOFF	.13	1	2	.08	.0	3.00	24.00
STRUCTURE 50	ADDHYD	.51	1	2	.08	.0	3.00	24.00
XSECTION 149	REACH	.51	1	2	.08	.0	3.00	24.00
STRUCTURE 51	ADDHYD	6.60	1	2	.08	.0	3.00	24.00

XSECTION	148	REACH	6.60	1	2	.08	.0	3.00	24.00
XSECTION	48	RUNOFF	.15	1	2	.08	.0	3.00	24.00
STRUCTURE	48	ADDHYD	6.75	1	2	.08	.0	3.00	24.00
XSECTION	141	REACH	6.75	1	2	.08	.0	3.00	24.00
XSECTION	40	RUNOFF	.30	1	2	.08	.0	3.00	24.00
STRUCTURE	41	ADDHYD	7.05	1	2	.08	.0	3.00	24.00
XSECTION	41	RUNOFF	.08	1	2	.08	.0	3.00	24.00
STRUCTURE	41	ADDHYD	7.13	1	2	.08	.0	3.00	24.00
XSECTION	185	REACH	7.13	1	2	.08	.0	3.00	24.00
XSECTION	85	RUNOFF	.05	1	2	.08	.0	3.00	24.00
STRUCTURE	85	ADDHYD	7.18	1	2	.08	.0	3.00	24.00
XSECTION	39	RUNOFF	.15	1	2	.08	.0	3.00	24.00
STRUCTURE	85	ADDHYD	7.33	1	2	.08	.0	3.00	24.00

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	2					
XSECTION 137	REACH	7.33	1	2	.08	.0	3.00	24.00
XSECTION 36	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 37	ADDHYD	7.50	1	2	.08	.0	3.00	24.00
XSECTION 37	RUNOFF	.12	1	2	.08	.0	3.00	24.00
STRUCTURE 37	ADDHYD	7.62	1	2	.08	.0	3.00	24.00
XSECTION 66	RUNOFF	.31	1	2	.08	.0	3.00	24.00
XSECTION 157	REACH	.31	1	2	.08	.0	3.00	24.00
XSECTION 57	RUNOFF	.16	1	2	.08	.0	3.00	24.00
STRUCTURE 57	ADDHYD	.47	1	2	.08	.0	3.00	24.00
XSECTION 154	REACH	.47	1	2	.08	.0	3.00	24.00
XSECTION 55	RUNOFF	.25	1	2	.08	.0	3.00	24.00
STRUCTURE 54	ADDHYD	.72	1	2	.08	.0	3.00	24.00
XSECTION 56	RUNOFF	.15	1	2	.08	.0	3.00	24.00
XSECTION 155	REACH	.15	1	2	.08	.0	3.00	24.00
STRUCTURE 54	ADDHYD	.87	1	2	.08	.0	3.00	24.00
SECTION 54	RUNOFF	.25	1	2	.08	.0	3.00	24.00
STRUCTURE 54	ADDHYD	1.12	1	2	.08	.0	3.00	24.00
XSECTION 153	REACH	1.12	1	2	.08	.0	3.00	24.00
XSECTION 53	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 53	ADDHYD	1.29	1	2	.08	.0	3.00	24.00

XSECTION 147	REACH	1.29	1	2	.08	.0	3.00	24.00
XSECTION 47	RUNOFF	.26	1	2	.08	.0	3.00	24.00
STRUCTURE 47	ADDHYD	1.55	1	2	.08	.0	3.00	24.00
XSECTION 142	REACH	1.55	1	2	.08	.0	3.00	24.00
XSECTION 42	RUNOFF	.20	1	2	.08	.0	3.00	24.00
STRUCTURE 43	ADDHYD	1.75	1	2	.08	.0	3.00	24.00
XSECTION 43	RUNOFF	.14	1	2	.08	.0	3.00	24.00
STRUCTURE 43	ADDHYD	1.89	1	2	.08	.0	3.00	24.00
XSECTION 45	RUNOFF	.24	1	2	.08	.0	3.00	24.00
XSECTION 46	RUNOFF	.23	1	2	.08	.0	3.00	24.00
STRUCTURE 45	ADDHYD	.47	1	2	.08	.0	3.00	24.00
XSECTION 143	REACH	.47	1	2	.08	.0	3.00	24.00
STRUCTURE 43	ADDHYD	2.36	1	2	.08	.0	3.00	24.00
XSECTION 136	REACH	2.36	1	2	.08	.0	3.00	24.00
STRUCTURE 37	ADDHYD	9.98	1	2	.08	.0	3.00	24.00
XSECTION 129	REACH	9.98	1	2	.08	.0	3.00	24.00

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TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	2					
XSECTION 27	RUNOFF	.16	1	2	.08	.0	3.00	24.00
STRUCTURE 29	ADDHYD	10.14	1	2	.08	.0	3.00	24.00
XSECTION 38	RUNOFF	.32	1	2	.08	.0	3.00	24.00
XSECTION 128	REACH	.32	1	2	.08	.0	3.00	24.00
XSECTION 28	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 28	ADDHYD	.49	1	2	.08	.0	3.00	24.00
XSECTION 127	REACH	.49	1	2	.08	.0	3.00	24.00
STRUCTURE 29	ADDHYD	10.63	1	2	.08	.0	3.00	24.00
XSECTION 29	RUNOFF	.23	1	2	.08	.0	3.00	24.00
XSECTION 29	ADDHYD	10.86	1	2	.08	.0	3.00	24.00
XSECTION 184	REACH	10.86	1	2	.08	.0	3.00	24.00
XSECTION 84	RUNOFF	.04	1	2	.08	.0	3.00	24.00
STRUCTURE 30	ADDHYD	10.90	1	2	.08	.0	3.00	24.00
XSECTION 30	RUNOFF	.10	1	2	.08	.0	3.00	24.00
STRUCTURE 30	ADDHYD	11.00	1	2	.08	.0	3.00	24.00
XSECTION 31	RUNOFF	.21	1	2	.08	.0	3.00	24.00

STRUCTURE 30	ADDHYD	11.21	1	2	.08	.0	3.00	24.00
XSECTION 44	RUNOFF	.17	1	2	.08	.0	3.00	24.00
XSECTION 135	REACH	.17	1	2	.08	.0	3.00	24.00
XSECTION 35	RUNOFF	.12	1	2	.08	.0	3.00	24.00
STRUCTURE 35	ADDHYD	.29	1	2	.08	.0	3.00	24.00
XSECTION 34	RUNOFF	.29	1	2	.08	.0	3.00	24.00
STRUCTURE 35	ADDHYD	.58	1	2	.08	.0	3.00	24.00
XSECTION 130	REACH	.58	1	2	.08	.0	3.00	24.00
STRUCTURE 30	ADDHYD	11.79	1	2	.08	.0	3.00	24.00
XSECTION 32	RUNOFF	.11	1	2	.08	.0	3.00	24.00
XSECTION 33	RUNOFF	.29	1	2	.08	.0	3.00	24.00
STRUCTURE 33	ADDHYD	.40	1	2	.08	.0	3.00	24.00
XSECTION 131	REACH	.40	1	2	.08	.0	3.00	24.00
STRUCTURE 30	ADDHYD	12.19	1	2	.08	.0	3.00	24.00
XSECTION 125	REACH	12.19	1	2	.08	.0	3.00	24.00
XSECTION 26	RUNOFF	.19	1	2	.08	.0	3.00	24.00
STRUCTURE 25	ADDHYD	12.38	1	2	.08	.0	3.00	24.00
XSECTION 25	RUNOFF	.04	1	2	.08	.0	3.00	24.00
STRUCTURE 25	ADDHYD	12.42	1	2	.08	.0	3.00	24.00
XSECTION 24	RUNOFF	.19	1	2	.08	.0	3.00	24.00

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TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIO
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	2					
STRUCTURE 25	ADDHYD	12.61	1	2	.08	.0	3.00	24.00
XSECTION 120	REACH	12.61	1	2	.08	.0	3.00	24.00
XSECTION 22	RUNOFF	.13	1	2	.08	.0	3.00	24.00
STRUCTURE 20	ADDHYD	12.74	1	2	.08	.0	3.00	24.00
XSECTION 20	RUNOFF	.09	1	2	.08	.0	3.00	24.00
STRUCTURE 20	ADDHYD	12.83	1	2	.08	.0	3.00	24.00
XSECTION 21	RUNOFF	.12	1	2	.08	.0	3.00	24.00
STRUCTURE 20	ADDHYD	12.95	1	2	.08	.0	3.00	24.00
XSECTION 19	RUNOFF	.17	1	2	.08	.0	3.00	24.00
TRUCTURE 20	ADDHYD	13.12	1	2	.08	.0	3.00	24.00
XSECTION 83	RUNOFF	.11	1	2	.08	.0	3.00	24.00
STRUCTURE 20	ADDHYD	13.23	1	2	.08	.0	3.00	24.00
XSECTION 23	RUNOFF	.28	1	2	.08	.0	3.00	24.00

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XSECTION 183	REACH	.28	1	2	.08	.0	3.00	24.00
STRUCTURE 20	ADDHYD	13.51	1	2	.08	.0	3.00	24.00
XSECTION 113	REACH	13.51	1	2	.08	.0	3.00	24.00
XSECTION 13	RUNOFF	.24	1	2	.08	.0	3.00	24.00
STRUCTURE 13	ADDHYD	13.75	1	2	.08	.0	3.00	24.00
XSECTION 14	RUNOFF	.07	1	2	.08	.0	3.00	24.00
STRUCTURE 13	ADDHYD	13.82	1	2	.08	.0	3.00	24.00
XSECTION 15	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 13	ADDHYD	13.99	1	2	.08	.0	3.00	24.00
XSECTION 16	RUNOFF	.21	1	2	.08	.0	3.00	24.00
XSECTION 115	REACH	.21	1	2	.08	.0	3.00	24.00
STRUCTURE 13	ADDHYD	14.20	1	2	.08	.0	3.00	24.00
XSECTION 18	RUNOFF	.13	1	2	.08	.0	3.00	24.00
XSECTION 17	RUNOFF	.17	1	2	.08	.0	3.00	24.00
STRUCTURE 18	ADDHYD	.30	1	2	.08	.0	3.00	24.00
XSECTION 114	REACH	.30	1	2	.08	.0	3.00	24.00
STRUCTURE 13	ADDHYD	14.50	1	2	.08	.0	3.00	24.00
XSECTION 106	REACH	14.50	1	2	.08	.0	3.00	24.00
XSECTION 6	RUNOFF	.13	1	2	.08	.0	3.00	24.00
STRUCTURE 6	ADDHYD	14.63	1	2	.08	.0	3.00	24.00
XSECTION 5	RUNOFF	.15	1	2	.08	.0	3.00	24.00
STRUCTURE 6	ADDHYD	14.78	1	2	.08	.0	3.00	24.00
XSECTION 7	RUNOFF	.19	1	2	.08	.0	3.00	24.00

1

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTION
(A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION		
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)
ALTERNATE	1	STORM	2					
STRUCTURE 6	ADDHYD	14.97	1	2	.08	.0	3.00	24.00
XSECTION 11	RUNOFF	.16	1	2	.08	.0	3.00	24.00
XSECTION 12	RUNOFF	.13	1	2	.08	.0	3.00	24.00
STRUCTURE 11	ADDHYD	.29	1	2	.08	.0	3.00	24.00
XSECTION 107	REACH	.29	1	2	.08	.0	3.00	24.00
STRUCTURE 6	ADDHYD	15.26	1	2	.08	.0	3.00	24.00
SECTION 104	REACH	15.26	1	2	.08	.0	3.00	24.00
XSECTION 4	RUNOFF	.19	1	2	.08	.0	3.00	24.00
STRUCTURE 4	ADDHYD	15.45	1	2	.08	.0	3.00	24.00
XSECTION 8	RUNOFF	.20	1	2	.08	.0	3.00	24.00

+

STRUCTURE	8	ADDHYD	15.65	1	2	.08	.0	3.00	24.00
XSECTION	10	RUNOFF	.14	1	2	.08	.0	3.00	24.00
XSECTION	109	REACH	.14	1	2	.08	.0	3.00	24.00
XSECTION	9	RUNOFF	.25	1	2	.08	.0	3.00	24.00
STRUCTURE	9	ADDHYD	.39	1	2	.08	.0	3.00	24.00
XSECTION	108	REACH	.39	1	2	.08	.0	3.00	24.00
STRUCTURE	99	ADDHYD	16.04	1	2	.08	.0	3.00	24.00

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TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTS

HYDROGRAPH INFORMATION

		INFLOW				OUTFLOW		INTERV.AREA	BASE-	VOLUME	MAIN	ITER
XSEC	REACH									ABOVE	TIME	ATIO
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	FLOW (CFS)		BASE (IN)	INCR (HR)	#
ALTERNATE		1	STORM	1								
+174	2300	244	6.1	234	6.1	---	---	0		1.40	.08	1
+173	2800	379	6.1	343	6.2	---	---	0		1.40	.08	1
+175	3850	303	6.2	269	6.4	---	---	0		1.40	.08	1
+176	4100	203	6.1	166	6.3	---	---	0		1.40	.08	1
+172	1700	1021	6.3	1021	6.3	---	---	0		1.40	.08	0
+178	3000	316	6.1	281	6.2	---	---	0		1.40	.08	1
+177	3350	1026	6.1	990	6.3	---	---	0		1.40	.08	1
+171	3850	2235	6.3	2128	6.4	---	---	0		1.40	.08	1

+170 +	2500	2270	6.4	2265	6.5	---	---	0	1.46	.08	1
+187	1200	2378	6.5	2378	6.5	---	---	0	1.50	.08	0
+169 +	3000	353	6.1	327	6.1	---	---	0	1.60	.08	1
+186 +	1400	486	6.1	486	6.1	---	---	0	1.79	.08	0
+163 +	4400	2685	6.5	2632	6.6	---	---	0	1.54	.08	1
+160 +	4400	2688	6.6	2624	6.6	---	---	0	1.55	.08	1
+167 +	3300	222	6.2	205	6.4	---	---	0	1.97	.08	1
+164 +	2500	621	6.2	611	6.3	---	---	0	2.44	.08	1
+159 +	3300	970	6.1	953	6.2	---	---	0	2.56	.08	1
151	4000	3280	6.6	3230	6.7	---	---	0	1.74	.08	1
+158 +	3600	242	6.1	213	6.2	---	---	0	2.82	.08	1
+152 +	3500	647	6.1	597	6.1	---	---	0	3.32	.08	1
+161 +	3400	391	6.2	373	6.4	---	---	0	2.91	.08	1
+150 +	2950	480	6.4	465	6.5	---	---	0	2.54	.08	1
+149 +	2400	612	6.4	606	6.6	---	---	0	2.61	.08	1
+148 +	3300	4123	6.6	4118	6.6	---	---	0	1.91	.08	1
+141 +	3100	4142	6.6	4139	6.7	---	---	0	1.91	.08	1
85	1100	4286	6.7	4286	6.7	---	---	0	1.92	.08	0
+137 +	3900	4323	6.7	4315	6.8	---	---	0	1.93	.08	1

+157 +	2300	661	6.1	658	6.2	---	---	0	3.00	.08	1
154	3500	1040	6.1	1017	6.2	---	---	0	3.21	.08	1
+155 +	3450	345	6.1	315	6.1	---	---	0	2.63	.08	1
+153 +	2050	2384	6.1	2384	6.1	---	---	0	3.15	.08	0
+147 + 1	2300	2606	6.1	2606	6.1	---	---	0	2.99	.08	0

TR20 XEQ 10/ 4/95 10:29 UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTS

HYDROGRAPH INFORMATION

+ XSEC REACH + ID	LENGTH (FT)	INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA		BASE- FLOW (CFS)	VOLUME	MAIN	ITER
		PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)		ABOVE BASE (IN)	TIME INCR (HR)	ATIO #
ALTERNATE		1	STORM	1							
+142 +	5400	2930	6.1	2721	6.2	---	---	0	2.80	.08	1
+143 +	2750	841	6.1	818	6.1	---	---	0	2.45	.08	1
+136 +	2050	3935	6.2	3935	6.2	---	---	0	2.71	.08	0
+129 +	3800	6692	6.3	6533	6.5	---	---	0	2.12	.08	1
+128	1700	369	6.2	368	6.3	---	---	0	2.04	.08	1
+127 +	2300	626	6.1	614	6.1	---	---	0	2.35	.08	1

+184 +	1350	7100	6.4	7100	6.4	---	---	0	2.15	.08	0
135	3100	285	6.1	265	6.2	---	---	0	2.46	.08	1
+130 +	3700	959	6.1	922	6.3	---	---	0	2.65	.08	1
+131 +	4400	1094	6.1	1044	6.1	---	---	0	3.59	.08	1
+125 +	1200	9049	6.3	9049	6.3	---	---	0	2.25	.08	0
+120 +	2700	9262	6.3	9262	6.3	---	---	0	2.28	.08	0
+183 +	2700	789	6.1	784	6.1	---	---	0	3.61	.08	1
+113 +	4200	10242	6.2	10141	6.3	---	---	0	2.34	.08	1
+115 +	1800	433	6.1	432	6.1	---	---	0	2.63	.08	1
+114 +	1750	731	6.1	731	6.1	---	---	0	2.90	.08	0
+106 +	3100	11230	6.2	11230	6.2	---	---	0	2.36	.08	0
+107 +	2650	803	6.1	788	6.1	---	---	0	3.49	.08	1
+104 +	1950	12713	6.2	12713	6.2	---	---	0	2.40	.08	0
+109 +	2350	360	6.0	354	6.1	---	---	0	2.82	.08	1
+108 +	2500	1007	6.0	987	6.1	---	---	0	2.94	.08	1
+ +	ALTERNATE	1	STORM	2							
+174 +	2300	97	6.1	82	6.1	---	---	0	.59	.08	1
73	2800	131	6.1	110	6.3	---	---	0	.58	.08	1
+175 +	3850	108	6.2	87	6.4	---	---	0	.58	.08	1

+167 +	3300	99	6.3	87	6.5	---	---	0	.96	.08	1
64	2500	311	6.2	299	6.4	---	---	0	1.30	.08	1
+159 +	3300	500	6.1	477	6.2	---	---	0	1.40	.08	1
+151 +	4000	944	6.6	932	7.1	---	---	0	.81	.08	1
+158 +	3600	137	6.1	109	6.2	---	---	0	1.59	.08	1
+152 +	3500	409	6.1	362	6.2	---	---	0	2.01	.08	1
+161 +	3400	215	6.3	198	6.5	---	---	0	1.66	.08	1
+150 +	2950	244	6.4	231	6.6	---	---	0	1.39	.08	1
+149 +	2400	304	6.5	295	6.6	---	---	0	1.44	.08	1
148	3300	1458	6.4	1443	6.5	---	---	0	.94	.08	1
+141 +	3100	1460	6.5	1446	6.6	---	---	0	.94	.08	1
+185 +	1100	1554	6.6	1554	6.6	---	---	0	.94	.08	0
+137 +	3900	1586	6.6	1555	6.7	---	---	0	.96	.08	1
+157 +	2300	379	6.1	372	6.2	---	---	0	1.74	.08	1
+154 +	3500	601	6.1	570	6.2	---	---	0	1.91	.08	1
+155 +	3450	192	6.1	159	6.2	---	---	0	1.45	.08	1
+153 +	2050	1318	6.1	1318	6.1	---	---	0	1.87	.08	0
17	2300	1417	6.1	1415	6.2	---	---	0	1.74	.08	1
+142 +	5400	1551	6.2	1413	6.4	---	---	0	1.60	.08	1

+183 +	2700	497	6.1	488	6.1	---	---	0	2.25	.08	1
113	4200	4805	6.1	4617	6.3	---	---	0	1.25	.08	1
+115 +	1800	231	6.1	225	6.1	---	---	0	1.44	.08	1
+114 +	1750	420	6.1	419	6.1	---	---	0	1.65	.08	1
+106 +	3100	5413	6.2	5413	6.2	---	---	0	1.27	.08	0
+107 +	2650	499	6.1	480	6.1	---	---	0	2.15	.08	1
+104 +	1950	6320	6.2	6320	6.2	---	---	0	1.30	.08	0
+109 +	2350	204	6.0	197	6.1	---	---	0	1.59	.08	1
+108 +	2500	571	6.0	563	6.1	---	---	0	1.69	.08	1

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 99	16.04		
+			
ALTERNATE 1		14534.06	7399.01
0 STRUCTURE 87	4.17		
+			
ALTERNATE 1		2702.24	817.19
0 STRUCTURE 85	7.33		
+			
ALTERNATE 1		4324.49	1586.31
0 STRUCTURE 78	1.17		
+			
ALTERNATE 1		1041.83	361.72
STRUCTURE 77	2.91		
+			
ALTERNATE 1		2262.04	715.59
0 STRUCTURE 75	1.39		

+	ALTERNATE	1		1026.56	335.94
0	STRUCTURE	74	.37		
+	ALTERNATE	1		379.44	133.56
0	STRUCTURE	71	3.27		
+	ALTERNATE	1		2270.28	677.48
0	STRUCTURE	70	3.58		
+	ALTERNATE	1		2380.85	702.63
0	STRUCTURE	69	.50		
+	ALTERNATE	1		495.97	199.28
0	STRUCTURE	67	.49		
+	ALTERNATE	1		620.87	311.16
0	STRUCTURE	64	.74		
+	ALTERNATE	1		971.26	500.77
0	STRUCTURE	63	4.33		
+	ALTERNATE	1		2689.02	794.97
0	STRUCTURE	61	.38		
+	ALTERNATE	1		481.68	244.23
1					

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 60	5.38		
+			
ALTERNATE 1		3295.14	945.14
0 STRUCTURE 58	.27		
+			
ALTERNATE 1		647.91	410.18
0 STRUCTURE 57	.47		
+			
ALTERNATE 1		1041.60	600.63
0 STRUCTURE 54	1.12		
+			
ALTERNATE 1		2385.37	1322.20
0 STRUCTURE 53	1.29		
+			
ALTERNATE 1		2607.56	1421.00
0 STRUCTURE 51	6.60		
+			
ALTERNATE 1		4126.85	1460.96
0 STRUCTURE 50	.51		

+	ALTERNATE	1		616.00	304.02
0	STRUCTURE	48	6.75		
+	ALTERNATE	1		4146.33	1461.16
0	STRUCTURE	47	1.55		
+	ALTERNATE	1		2931.08	1552.69
0	STRUCTURE	45	.47		
+	ALTERNATE	1		846.69	443.57
0	STRUCTURE	43	2.36		
+	ALTERNATE	1		3949.75	1850.35
0	STRUCTURE	41	7.13		
+	ALTERNATE	1		4286.10	1555.29
0	STRUCTURE	37	9.98		
+	ALTERNATE	1		6693.00	3056.74
0	STRUCTURE	35	.58		
+	ALTERNATE	1		961.71	498.33
1					

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 33	.40		
+			
ALTERNATE 1		1108.60	697.31
0 STRUCTURE 30	12.19		
+			
ALTERNATE 1		9066.71	4068.71
0 STRUCTURE 29	10.63		
+			
ALTERNATE 1		7045.28	3164.60
0 STRUCTURE 28	.49		
+			
ALTERNATE 1		627.69	323.12
0 STRUCTURE 25	12.61		
+			
ALTERNATE 1		9261.93	4155.06
0 STRUCTURE 20	13.51		
+			
ALTERNATE 1		10258.39	4806.10
0 STRUCTURE 18	.30		
+			
ALTERNATE 1		740.96	422.71
0 STRUCTURE 13	14.50		

+	ALTERNATE	1		11230.27	5414.70
0	STRUCTURE	11	.29		
+	ALTERNATE	1		806.16	499.54
✓	STRUCTURE	9	.39		
+	ALTERNATE	1		1011.48	581.15
0	STRUCTURE	8	15.65		
+	ALTERNATE	1		13616.33	6864.89
0	STRUCTURE	6	15.26		
+	ALTERNATE	1		12778.74	6365.17
0	STRUCTURE	4	15.45		
+	ALTERNATE	1		13158.07	6581.92
0	XSECTION	4	.19		
+	ALTERNATE	1		487.20	280.12
1					

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION	5	.15	
+	ALTERNATE	1	
0 XSECTION	6	.13	355.89 197.55
+	ALTERNATE	1	
0 XSECTION	7	.19	240.33 124.14
+	ALTERNATE	1	
0 XSECTION	8	.20	442.41 274.84
+	ALTERNATE	1	
0 XSECTION	9	.25	508.36 308.85
+	ALTERNATE	1	
0 XSECTION	10	.14	692.07 408.21
+	ALTERNATE	1	
0 XSECTION	11	.16	360.29 205.93
+	ALTERNATE	1	
✓ XSECTION	12	.13	425.05 259.09
+	ALTERNATE	1	
0 XSECTION	13	.24	382.51 241.63

+	ALTERNATE	1			
0	XSECTION	14	.07	505.77	269.05
+	ALTERNATE	1			
✓	XSECTION	15	.17	181.29	104.49
+	ALTERNATE	1			
0	XSECTION	16	.21	378.63	207.82
+	ALTERNATE	1			
0	XSECTION	17	.17	434.11	233.03
+	ALTERNATE	1			
0	XSECTION	18	.13	397.24	222.13
+	ALTERNATE	1			
1				346.50	202.75

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 19	.17		
+	ALTERNATE 1		
0 XSECTION 20	.09	405.10	227.31
+	ALTERNATE 1		
0 XSECTION 21	.12	194.86	101.48
+	ALTERNATE 1		
0 XSECTION 22	.13	326.33	189.87
+	ALTERNATE 1		
0 XSECTION 23	.28	394.57	243.28
+	ALTERNATE 1		
0 XSECTION 24	.19	791.70	497.80
+	ALTERNATE 1		
0 XSECTION 25	.04	576.76	366.42
+	ALTERNATE 1		
0 XSECTION 26	.19	107.02	59.63
+	ALTERNATE 1		
✓ XSECTION 27	.16	482.00	274.23
+	ALTERNATE 1		
0 XSECTION 28	.17	402.22	228.28

+					
	ALTERNATE	1		446.97	259.20
0	XSECTION	29	10.86		
+					
	ALTERNATE	1		7114.54	3195.35
0	XSECTION	30	.10		
+					
	ALTERNATE	1		153.79	79.43
0	XSECTION	31	.21		
+					
	ALTERNATE	1		411.97	250.37
0	XSECTION	32	.11		
+					
	ALTERNATE	1		266.06	170.51
1					

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 33	.29		
ALTERNATE 1		870.16	545.79
0 XSECTION 34	.29		
ALTERNATE 1		493.81	263.30
0 XSECTION 35	.12		
ALTERNATE 1		257.11	140.36
0 XSECTION 36	.17		
ALTERNATE 1		244.74	125.75
0 XSECTION 37	.12		
ALTERNATE 1		200.95	92.00
0 XSECTION 38	.32		
ALTERNATE 1		368.55	168.41
0 XSECTION 39	.15		
ALTERNATE 1		338.97	186.48
0 XSECTION 40	.30		
ALTERNATE 1		379.84	184.27
0 XSECTION 41	.08		
ALTERNATE 1		84.54	31.09
0 XSECTION 42	.20		
ALTERNATE 1		389.10	202.06
0 XSECTION 43	.14		

+	ALTERNATE	1			
0	XSECTION	44	.17	347.13	196.28
+	ALTERNATE	1			
✓	XSECTION	45	.24	284.57	145.51
+	ALTERNATE	1			
0	XSECTION	46	.23	566.69	320.91
+	ALTERNATE	1			
1	XSECTION			302.57	137.25

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UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 47	.26		
+	ALTERNATE 1		
✓ XSECTION 48	.15	324.24	143.30
+	ALTERNATE 1		
0 XSECTION 49	.10	243.72	110.61
+	ALTERNATE 1		
0 XSECTION 50	.13	170.40	83.50
+	ALTERNATE 1		
0 XSECTION 51	.15	208.78	112.99
+	ALTERNATE 1		
0 XSECTION 52	.19	211.31	96.79
+	ALTERNATE 1		
0 XSECTION 53	.17	311.88	169.12
+	ALTERNATE 1		
0 XSECTION 54	.25	222.27	98.97
+	ALTERNATE 1		
0 XSECTION 55	.25	714.19	449.47
+	ALTERNATE 1		
0 XSECTION 56	.15	505.86	282.19
+	ALTERNATE 1		
✓ XSECTION 57	.16	354.24	194.79
+	ALTERNATE 1		
0 XSECTION 58	.17	452.40	284.46

+	ALTERNATE	1			
0	XSECTION	59	.16	517.29	328.47
+	ALTERNATE	1			
	XSECTION	60	.15	371.80	210.03
+	ALTERNATE	1			
1				178.07	75.35

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID			DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
				1	2
0	XSECTION	61	.13		
+					
	ALTERNATE	1		123.70	52.23
0	XSECTION	62	.25		
+					
	ALTERNATE	1		394.99	216.11
0	XSECTION	63	.16		
+					
	ALTERNATE	1		194.93	84.35
0	XSECTION	64	.25		
+					
	ALTERNATE	1		584.18	326.66
0	XSECTION	65	.10		
+					
	ALTERNATE	1		244.95	138.16
0	XSECTION	66	.31		
+					
	ALTERNATE	1		668.83	380.46
0	XSECTION	67	.27		
+					
	ALTERNATE	1		477.87	259.19
0	XSECTION	68	.22		
+					
	ALTERNATE	1		224.59	99.36
0	XSECTION	69	.25		
+					
	ALTERNATE	1		219.07	96.75
0	XSECTION	70	.31		
+					
	ALTERNATE	1		458.78	210.83
0	XSECTION	71	.36		
+					
	ALTERNATE	1		575.74	267.37
0	XSECTION	72	.25		
+					
	ALTERNATE	1		354.53	148.80
0	XSECTION	73	.12		

+	ALTERNATE	1		92.61	32.80
0	XSECTION	74	.18		
+	ALTERNATE	1		148.53	52.40

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 75	.12		
+	ALTERNATE 1	75.13	26.14
0 XSECTION 76	.17		
+	ALTERNATE 1	107.47	37.62
0 XSECTION 77	.25		
+	ALTERNATE 1	182.71	64.37
0 XSECTION 78	.88		
+	ALTERNATE 1	762.75	271.55
0 XSECTION 79	.29		
+	ALTERNATE 1	318.12	117.87
0 XSECTION 80	.22		
+	ALTERNATE 1	202.83	73.32
0 XSECTION 81	.39		
+	ALTERNATE 1	304.01	107.97
0 XSECTION 82	.19		
+	ALTERNATE 1	249.72	97.75
0 XSECTION 83	.11		
+	ALTERNATE 1	318.60	201.78
0 XSECTION 84	.04		
+	ALTERNATE 1	117.00	68.96
0 XSECTION 85	.05		
+	ALTERNATE 1	82.41	37.56
0 XSECTION 86	.05		
+	ALTERNATE 1	71.95	33.01
0 XSECTION 87	.04		
+	ALTERNATE 1	61.57	27.75

0 XSECTION 88 .10
 +
 ALTERNATE 1
 1

100.20 36.82

TR20 XEQ 10/ 4/95 10:29
 REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 104	15.26		
+ ALTERNATE 1		12778.74	6365.17
0 XSECTION 106	14.50		
+ ALTERNATE 1		11230.27	5414.70
0 XSECTION 107	.29		
+ ALTERNATE 1		788.35	480.63
0 XSECTION 108	.39		
+ ALTERNATE 1		997.37	576.48
0 XSECTION 109	.14		
+ ALTERNATE 1		355.09	205.85
0 XSECTION 113	13.51		
+ ALTERNATE 1		10158.93	4626.19
0 XSECTION 114	.30		
+ ALTERNATE 1		740.96	420.73
0 XSECTION 115	.21		
+ ALTERNATE 1		433.22	228.82
0 XSECTION 120	12.61		
+ ALTERNATE 1		9261.93	4155.06
0 XSECTION 125	12.19		
+ ALTERNATE 1		9066.71	4068.71
0 XSECTION 127	.49		
+ ALTERNATE 1		614.64	308.77
0 XSECTION 128	.32		
+ ALTERNATE 1		368.18	166.28
0 XSECTION 129	9.98		
+ ALTERNATE 1		6554.89	2966.24
0 XSECTION 130	.58		
+ ALTERNATE 1		933.39	473.33

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 131	.40		
+ ALTERNATE 1		1044.35	636.41
0 XSECTION 135	.17		
+ ALTERNATE 1		268.32	131.17
0 XSECTION 136	2.36		
+ ALTERNATE 1		3949.75	1850.35
0 XSECTION 137	7.33		
+ ALTERNATE 1		4314.83	1555.11
0 XSECTION 141	6.75		
+ ALTERNATE 1		4144.85	1446.16
0 XSECTION 142	1.55		
+ ALTERNATE 1		2753.37	1413.57
0 XSECTION 143	.47		
+ ALTERNATE 1		830.30	425.58
0 XSECTION 147	1.29		
+ ALTERNATE 1		2607.56	1418.99
0 XSECTION 148	6.60		
+ ALTERNATE 1		4124.32	1445.48
0 XSECTION 149	.51		
+ ALTERNATE 1		606.26	295.69
0 XSECTION 150	.38		
+ ALTERNATE 1		466.70	231.48
0 XSECTION 151	5.38		
+ ALTERNATE 1		3230.47	933.43
0 XSECTION 152	.27		
+ ALTERNATE 1		600.45	366.77
0 XSECTION 153	1.12		
+ ALTERNATE 1		2385.37	1322.20

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 154	.47		
+			
ALTERNATE 1		1017.74	575.37
0 XSECTION 155	.15		
+			
ALTERNATE 1		315.06	160.42
0 XSECTION 157	.31		
+			
ALTERNATE 1		663.21	372.02
0 XSECTION 158	.10		
+			
ALTERNATE 1		213.73	110.85
0 XSECTION 159	.74		
+			
ALTERNATE 1		953.85	480.27
0 XSECTION 160	4.33		
+			
ALTERNATE 1		2631.18	769.08
0 XSECTION 161	.25		
+			
ALTERNATE 1		373.47	198.93
0 XSECTION 163	4.17		
+			
ALTERNATE 1		2632.31	782.48
0 XSECTION 164	.49		
+			
ALTERNATE 1		612.79	301.40
0 XSECTION 167	.22		
+			
ALTERNATE 1		206.19	86.72
0 XSECTION 169	.25		
+			
ALTERNATE 1		327.64	124.18
0 XSECTION 170	3.27		
+			
ALTERNATE 1		2264.65	664.95
0 XSECTION 171	2.91		
+			
ALTERNATE 1		2130.34	630.48
0 XSECTION 172	1.39		
+			
ALTERNATE 1		1026.56	333.92

1

TR20 XEQ 10/ 4/95 10:29
REV PC/09/83

UPPER SAND CREEK -- FUTURE CONDITION -- ALTERNAT
24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

Technical Addendum

TR 20 Input/Output for the West Fork Sand Creek Basin

Existing Basin Condition 100-year and 10-year

*****50-80 LIST OF INPUT DATA FOR TP-20 HYDROLOGY*****

JOB TP-20 SUMMARY NOPLOTS

TITLE 001 WEST FORK SAND CREEK -- EXISTING CONDITION

TITLE 24 HR TYPE IIA STORM (100- AND 10-YR. AMC=2)

5 RAINFL 1	.50				
8	0.000	.0015	0.005	.0080	0.012
8	0.017	0.021	0.026	0.032	0.046
8	0.060	0.100	0.700	0.750	0.780
8	0.800	0.820	0.830	0.840	0.850
8	0.860	0.870	0.875	0.883	0.890
8	0.898	0.905	0.912	0.918	0.924
8	0.930	0.935	0.940	0.945	0.950
8	0.955	0.960	0.965	0.970	0.975
8	0.980	0.983	0.985	0.988	0.990
8	0.993	0.995	0.998	1.000	1.000

9 ENDTBL

6 RUNOFF 1 68	1	0.22	82.0	0.36
6 REACH 3 167	1 2	3400.0	1.0	1.63
6 RUNOFF 1 66	1	0.35	77.0	0.54
6 ADDHYD 4 67	1 2 3			
6 RUNOFF 1 67	2	0.26	84.0	.33
6 ADDHYD 4 67	3 2 1			
6 REACH 3 169	1 3	1250.0	0.9	1.63
6 RUNOFF 1 69	2	0.15	78.0	0.33
6 ADDHYD 4 69	2 3 1			
6 REACH 3 170	1 2	2950.0	1.4	1.52
6 RUNOFF 1 70	1	0.29	83.0	.34
6 ADDHYD 4 70	1 2 3			
6 RUNOFF 1 71	1	0.23	81.0	0.43
6 ADDHYD 4 70	1 3 2			
6 RUNOFF 1 72	1	0.33	78.0	0.59
6 ADDHYD 4 70	2 1 3			
6 REACH 3 159	3 1	2700.0	0.4	1.62
6 RUNOFF 1 59	2	0.30	84.0	0.41
6 ADDHYD 4 59	1 2 3			
6 REACH 3 158	3 1	2200.0	0.6	1.57
6 RUNOFF 1 58	2	0.25	82.0	0.38
6 ADDHYD 4 58	1 2 3			
6 RUNOFF 1 60	1	0.31	80.0	.39
6 REACH 3 157	1 2	3200.0	0.7	1.57
6 RUNOFF 1 57	4	0.09	81.0	0.47
6 ADDHYD 4 58	2 3 1			
6 ADDHYD 4 58	1 4 2			
6 REACH 3 156	2 1	1800.0	0.5	1.59
6 RUNOFF 1 56	3	0.19	87.0	.71
6 ADDHYD 4 56	1 3 2			
6 REACH 3 155	2 1	2300.0	0.3	1.59

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

6	RUNOFF	1	55	3	0.36	84.0	0.41	
6	ADDHYD	4	55	1 3 2				
6	RUNOFF	1	54	1	0.18	82.0	.41	
6	ADDHYD	4	55	1 2 4				
6	RUNOFF	1	65	3	0.21	83.0	.33	
6	REACH	3	164	3 1	3200.0	0.3	1.57	
6	RUNOFF	1	64	2	0.28	78.0	0.79	
6	ADDHYD	4	64	1 2 3				
6	RUNOFF	1	62	1	0.13	82.0	0.38	
6	ADDHYD	4	64	3 1 2				
6	REACH	3	163	2 1	1100.0	1.2	1.59	
6	RUNOFF	1	63	2	0.14	84.0	1.14	
6	ADDHYD	4	63	1 2 3				
6	REACH	3	161	3 1	2000.0	1.0	1.47	
6	RUNOFF	1	61	2	0.15	83.0	.32	
6	ADDHYD	4	61	1 2 3				
6	REACH	3	154	3 1	4540.0	0.7	1.59	
6	ADDHYD	4	55	1 4 2				
6	REACH	3	152	2 1	2950.0	0.3	1.58	
6	RUNOFF	1	52	2	0.17	84.0	0.96	
6	ADDHYD	4	52	1 2 3				
6	RUNOFF	1	53	1	0.23	80.0	.65	
6	ADDHYD	4	52	3 1 2				
6	REACH	3	151	2 1	4400.0	0.3	1.59	
6	RUNOFF	1	51	3	0.22	83.0	1.23	
6	ADDHYD	4	27	3 1 2				1 1 1 1 TO SC

ENDATA

7 LIST

7 INCREM 6 .033 2-MIN.

7 COMPUT 7 68 27 0.0 4.4 1.01 2 01 01 100-YR

ENDCMP 1

7 COMPUT 7 68 27 0.0 3.0 1.01 2 01 02 10-YR

ENDCMP 1

ENDJOB 2

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

1

ASS	1	TR20 XEQ	2/15/91	0: 5	WEST FORK SAND CREEK -- EXISTING CONDITION	JOB	1	P
AGE	1	REV	PC/09/83		24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)			P

FILE NO. 1

0

COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY USER NOTES

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

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

THE PURPOSE OF THIS PROGRAM IS TO PROVIDE A SIMPLE, EASY-TO-USE, AND ACCURATE METHOD FOR ESTIMATING FLOOD PEAKS AND FLOOD VOLUMES.

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 70	1.83		
+			
ALTERNATE 1	2942.51	1446.27	
0 STRUCTURE 69	.98		
+			
ALTERNATE 1	1627.76	810.74	
0 STRUCTURE 67	.83		
+			
ALTERNATE 1	1373.06	695.55	
0 STRUCTURE 64	.62		
+			
ALTERNATE 1	836.27	406.67	
0 STRUCTURE 63	.76		
+			
ALTERNATE 1	920.21	458.08	
0 STRUCTURE 61	.91		
+			
ALTERNATE 1	1089.94	506.76	
0 STRUCTURE 59	2.13		
+			
ALTERNATE 1	3446.31	1681.94	
0 STRUCTURE 58	2.78		
+			
ALTERNATE 1	4466.04	2157.11	
0 STRUCTURE 56	2.97		
+			
ALTERNATE 1	4763.22	2317.86	
0 STRUCTURE 55	4.42		
+			
ALTERNATE 1	6475.00	3060.03	
0 STRUCTURE 52	4.82		
+			
ALTERNATE 1	6857.11	3228.41	
0 STRUCTURE 27	5.04		
+			
ALTERNATE 1	6844.59	3198.86	
0 XSECTION 51	.22		
+			
ALTERNATE 1	199.29	103.01	
0 XSECTION 52	.17		
+			

ALTERNATE 1 196.65 103.57
1

TR20 XEQ 8/ 3/93 13:23 WEST FORK SAND CREEK -- EXISTING CONDITION
SUMMARY
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

JOB 1

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 53	.23		
+			
ALTERNATE 1		299.92	148.08
0 XSECTION 54	.18		
+			
ALTERNATE 1		332.91	174.49
0 XSECTION 55	.36		
+			
ALTERNATE 1		717.57	389.30
0 XSECTION 56	.19		
+			
ALTERNATE 1		309.41	172.73
0 XSECTION 57	.09		
+			
ALTERNATE 1		149.35	76.33
0 XSECTION 58	.25		
+			
ALTERNATE 1		479.79	252.54
0 XSECTION 59	.30		
+			
ALTERNATE 1		597.98	324.42
0 XSECTION 60	.31		
+			
ALTERNATE 1		544.34	276.07
0 XSECTION 61	.15		
+			
ALTERNATE 1		319.52	172.64
0 XSECTION 62	.13		
+			
ALTERNATE 1		249.49	131.32
0 XSECTION 63	.14		
+			
ALTERNATE 1		140.84	74.10
0 XSECTION 64	.28		
+			
ALTERNATE 1		288.76	136.17

0 XSECTION 65	.21		
+			
ALTERNATE 1		443.52	239.63
0 XSECTION 66	.35		
+			
ALTERNATE 1		450.65	211.10
1			

TR20 XEQ 8/ 3/93 13:23 WEST FORK SAND CREEK -- EXISTING CONDITION
SUMMARY
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

JOB 1

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2

0 XSECTION 67	.26		
+			
ALTERNATE 1		568.62	312.08
0 XSECTION 68	.22		
+			
ALTERNATE 1		434.34	229.53
0 XSECTION 69	.15		
+			
ALTERNATE 1		262.34	129.51
0 XSECTION 70	.29		
+			
ALTERNATE 1		603.64	325.39
0 XSECTION 71	.23		
+			
ALTERNATE 1		400.38	205.56
0 XSECTION 72	.33		
+			
ALTERNATE 1		420.10	200.09
0 XSECTION 151	4.82		
+			
ALTERNATE 1		6676.03	3103.78
0 XSECTION 152	4.42		
+			
ALTERNATE 1		6384.56	2993.78
0 XSECTION 154	.91		
+			
ALTERNATE 1		1052.82	488.14
0 XSECTION 155	2.97		
+			
ALTERNATE 1		4708.96	2272.51
0 XSECTION 156	2.78		

+			
ALTERNATE	1	4456.40	2145.16
0 XSECTION	157	.31	
+			
ALTERNATE	1	514.46	250.29
0 XSECTION	158	2.13	
+			
ALTERNATE	1	3426.04	1662.98
0 XSECTION	159	1.83	
+			
ALTERNATE	1	2900.41	1408.85
1			

TR20 XEQ 8/ 3/93 13:23 WEST FORK SAND CREEK -- EXISTING CONDITION
SUMMARY
REV PC/09/83 24 HR TYPE IIA STORM (100- AND 10-YR, AMC=2)

JOB 1

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2

0 XSECTION	161	.76	
+			
ALTERNATE	1	908.84	449.70
0 XSECTION	163	.62	
+			
ALTERNATE	1	836.27	406.33
0 XSECTION	164	.21	
+			
ALTERNATE	1	381.54	190.05
0 XSECTION	167	.22	
+			
ALTERNATE	1	419.40	215.29
0 XSECTION	169	.83	
+			
ALTERNATE	1	1373.06	694.98
0 XSECTION	170	.98	
+			
ALTERNATE	1	1608.22	792.82
1END OF 1 JOBS IN THIS RUN			

Technical Addendum

TR 20 Input/Output for the East Fork Sand Creek

Existing Basin Conditions, 10- and 100-year

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

JOB TR-20

NOPLOTS

TITLE 001 EXISTING CONDITION E. FORK SAND CREEK TRIB. - ARIES PROPERTIES efsc

TITLE 24 HR TYPE IIA CURVE

5	RAINFL	1			.50				
8					0.000	.0025	0.005	.0075	0.010
8					0.015	0.020	0.025	0.030	0.050
8					0.060	0.100	0.700	0.750	0.780
8					0.798	0.820	0.830	0.840	0.850
8					0.860	0.865	0.870	0.885	0.890
8					0.900	0.905	0.910	0.915	0.921
8					0.927	0.933	0.940	0.945	0.950
8					0.955	0.960	0.965	0.970	0.975
8					0.980	0.983	0.985	0.988	0.990
8					0.993	0.995	0.998	1.000	1.000
9	ENDTBL								
6	RUNOFF	1	80	1		0.07	55.0	0.41	1
6	REACH	3	79	1 2		5597.0	1.7	1.25	
6	RUNOFF	1	79	1		0.28	55.0	0.35	1
6	ADDHYD	4	38	1 2 3					1
6	REACH	3	150	3 1		6574.0	1.1	1.4	
6	RUNOFF	1	78	2		0.37	55.0	1.47	1
6	REACH	3	51	2 3		1531.0	1.0	1.4	
6	RUNOFF	1	51	4		0.11	55.0	0.09	1
6	ADDHYD	4	37	3 4 2					1
6	REACH	3	50	2 3		3000.0	1.1	1.4	
6	RUNOFF	1	50	2		0.36	60.0	0.49	1
6	RUNOFF	1	49	4		0.28	56.0	0.53	1
6	REACH	3	152	4 5		2682.0	1.0	1.4	
6	ADDHYD	4	33	2 5 6					
6	ADDHYD	4	33	6 1 5					
6	ADDHYD	4	33	5 3 1					
6	REACH	3	47	1 2		4678.0	0.2	1.7	
6	RUNOFF	1	48	1		0.27	60.0	1.39	1
6	REACH	3	147	1 3		6040.0	1.1	1.4	
6	RUNOFF	1	47	1		0.62	60.0	0.91	1
6	ADDHYD	4	32	1 3 4					
6	ADDHYD	4	32	4 2 1					1
6	REACH	3	145	1 2		3802.0	0.2	1.7	
6	RUNOFF	1	45	1		0.500	60.0	0.34	1
6	ADDHYD	4	29	1 2 3					1
6	RUNOFF	1	81	1		0.38	60.0	0.39	1
6	RUNOFF	1	96	2		0.13	60.0	0.88	1
6	REACH	3	81	2 4		6389.0	1.4	1.3	
6	ADDHYD	4	54	4 1 2					1
6	REACH	3	76	2 1		5702.0	1.9	1.3	
6	RUNOFF	1	76	2		0.24	60.0	0.34	1

1

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

6	ADDHYD	4	39	1	2	4					1
6	REACH	3	53	4	1		3453.0	1.1	1.4		
6	RUNOFF	1	53		2		0.33	60.0	0.45		1
6	RUNOFF	1	77		4		0.23	60.0	1.68		1
6	REACH	3	153	4	5		3379.0	.7	1.4		
6	ADDHYD	4	36	1	2	4					
6	ADDHYD	4	36	4	5	1					1
6	REACH	3	52	1	2		1584.0	0.3	1.6		
6	RUNOFF	1	52		1		0.19	60.0	0.37		1
6	ADDHYD	4	34	2	1	4					1
6	REACH	3	46	4	1		3770.0	0.3	1.6		
6	RUNOFF	1	46		2		0.26	60.0	0.66		1
6	ADDHYD	4	31	1	2	4					1
6	REACH	3	145	4	1		3600	0.2	1.7		
6	ADDHYD	4	29	1	3	2					1
6	RUNOFF	1	93		1		0.26	62.0	1.12		1
6	RUNOFF	1	94		3		0.40	62.0	0.30		1
6	RUNOFF	1	98		4		0.16	63.0	0.43		1
6	REACH	3	194	4	5		5914.0	1.8	1.3		
6	RUNOFF	1	97		4		0.13	60.0	0.43		1
6	REACH	3	94	4	6		5914.0	1.7	1.3		
6	ADDHYD	4	55	1	3	7					
6	ADDHYD	4	55	7	5	1					
6	ADDHYD	4	55	1	6	3					1
6	REACH	3	83	3	1		6124.0	1.9	1.3		
6	RUNOFF	1	83		3		0.34	60.0	1.52		1
6	RUNOFF	1	95		4		0.14	60.0	1.38		1
6	REACH	3	82	4	5		5808.0	1.4	1.3		
6	RUNOFF	1	82		4		0.25	60.0	0.31		1
6	ADDHYD	4	53	1	3	6					
6	ADDHYD	4	53	6	5	1					
6	ADDHYD	4	53	1	4	3					1
6	REACH	3	75	3	1		4013.0	1.9	1.3		
6	RUNOFF	1	75		3		0.16	60.0	0.69		1
6	ADDHYD	4	41	1	3	4					1
6	REACH	3	73	4	1		1610.0	0.8	1.5		
6	RUNOFF	1	73		3		0.28	60.0	1.57		1
6	ADDHYD	4	40	1	3	4					1
6	RUNOFF	1	99		1		0.45	60.0	1.14		1
6	REACH	3	92	1	3		5650.0	2.1	1.3		
6	RUNOFF	1	92		5		0.34	60.0	0.28		1
6	ADDHYD	4	56	3	5	1					1
6	REACH	3	84	1	3		5491.0	2.0	1.3		
6	RUNOFF	1	84		5		0.27	60.0	0.29		1
6	ADDHYD	4	52	3	5	1					1
6	RUNOFF	1	91		3		0.42	60.0	1.14		1

1

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

6	REACH	3	85	3	5		6178.0	1.4	1.3		
6	ADDHYD	4	52	1	5	3					1

6	RUNOFF	1	85	1	0.19	60.0	0.36	1
6	ADDHYD	4	52	1 3 5				1
6	REACH	3	74	5 6	4066.0	1.9	1.3	
6	RUNOFF	1	74	1	0.19	60.0	0.21	1
6	ADDHYD	4	42	1 6 5				1
6	REACH	3	73	5 1	1610.0	0.8	1.5	
6	ADDHYD	4	40	1 4 3				
6	RUNOFF	1	86	1	0.33	60.0	1.48	1
6	REACH	3	72	1 4	3500.0	1.7	1.3	
6	RUNOFF	1	72	1	0.29	60.0	0.88	1
6	ADDHYD	4	43	1 4 5				1
6	REACH	3	173	5 1	1864.0	2.0	1.3	
6	ADDHYD	4	40	1 3 4				1
6	RUNOFF	1	71	1	0.13	60.0	0.75	1
6	REACH	3	57	1 3	4102.0	.7	1.4	
6	RUNOFF	1	57	1	0.18	60.0	1.25	1
6	ADDHYD	4	46	1 3 5				1
6	REACH	3	55	5 1	3000.0	2.9	1.4	
6	RUNOFF	1	55	3	0.17	62.0	1.00	1
6	RUNOFF	1	54	5	0.31	62.0	1.54	1
6	REACH	3	54	4 6	4974.0	0.5	1.6	
6	ADDHYD	4	35	6 1 4				
6	ADDHYD	4	35	4 3 1				
6	ADDHYD	4	35	1 5 3				1
6	REACH	3	44	3 1	5016.0	0.5	1.6	
6	RUNOFF	1	56	3	0.09	62.0	0.39	1
6	REACH	3	144	3 4	4419.0	.9	1.6	
6	RUNOFF	1	43	5	0.16	57.0	0.45	1
6	REACH	3	146	5 3	1200	1.9	1.3	
6	RUNOFF	1	44	5	0.29	60.0	0.24	1
6	ADDHYD	4	30	3 4 6				
6	ADDHYD	4	30	6 1 3				
6	ADDHYD	4	30	3 5 1			1 1 1	1
6	REACH	3	45	1 3	2893.0	0.1	1.7	
6	ADDHYD	4	29	2 3 1			1 1 1	1
6	REACH	3	28	1 2	3168.0	0.1	1.7	
6	RUNOFF	1	29	3	0.17	62.0	0.73	1
6	REACH	3	128	3 1	3131.0	0.5	1.5	
6	RUNOFF	1	27	3	0.15	60.0	0.28	1
6	RUNOFF	1	28	4	0.32	60.0	0.37	1
6	ADDHYD	4	19	2 1 5				
6	ADDHYD	4	19	5 3 1				
6	ADDHYD	4	19	1 4 2			1 1 1	1
6	REACH	3	26	2 1	3221.0	0.2	1.7	

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

6	RUNOFF	1	26	2	0.47	50.0	0.90	1
6	ADDHYD	4	18	1 2 3				1
6	REACH	3	25	3 1	2323.0	0.2	1.7	
6	RUNOFF	1	25	2	0.26	60.0	0.29	1

6	ADDHYD	4	17	1	2	3						1
6	REACH	3	24	3	1		2524.0	0.2	1.7			
6	RUNOFF	1	24		2		0.28	56.0	0.16			1
6	ADDHYD	4	12	1	2	3						
6	RUNOFF	1	41		1		0.16	57.0	0.75			1
6	REACH	3	31	1	2		3358.0	1.1	1.5			
6	RUNOFF	1	31		1		0.24	61.0	0.18			1
6	ADDHYD	4	20	1	2	4						1
6	REACH	3	30	4	1		2323.0	1.6	1.6			
6	RUNOFF	1	30		2		0.10	62.0	0.08			1
6	ADDHYD	4	16	1	2	4						1
6	REACH	3	124	4	1		4594.0	0.7	1.6			
6	RUNOFF	1	32		2		0.15	52.0	0.91			1
6	REACH	3	198	2	4		5227.0	1.2	1.6			
6	ADDHYD	4	12	1	4	2						
6	ADDHYD	4	12	2	3	1						1
6	REACH	3	18	1	2		3696.0	0.2	1.7			
6	RUNOFF	1	18		7		0.40	57.0	0.78			1
6	ADDHYD	4	57	2	7	1				1	1	1
6	RUNOFF	1	87		2		0.15	60.0	1.35			1
6	REACH	3	70	2	3		5613.0	1.2	1.3			
6	RUNOFF	1	70		2		0.26	60.0	0.88			1
6	ADDHYD	4	47	2	3	4						1
6	REACH	3	58	4	2		5016.0	1.6	1.3			
6	RUNOFF	1	58		3		0.28	60.0	0.55			1
6	ADDHYD	4	28	2	3	4						1
6	REACH	3	42	4	2		2746.0	1.2	1.4			
6	RUNOFF	1	42		3		0.20	54.0	0.37			1
6	ADDHYD	4	27	2	3	4						1
6	REACH	3	40	4	2		2218.0	1.2	1.4			
6	RUNOFF	1	40		3		0.14	60.0	1.11			1
6	ADDHYD	4	26	2	3	4						1
6	REACH	3	199	4	2		216.0	.3	1.6			
6	RUNOFF	1	90		3		0.06	60.0	0.63			1
6	REACH	3	88	3	4		5597.0	1.9	1.3			
6	RUNOFF	1	88		3		0.26	60.0	0.29			1
6	ADDHYD	4	50	3	4	5						1
6	REACH	3	68	5	3		3643.0	1.7	1.3			
6	RUNOFF	1	89		4		0.10	60.0	0.46			1
6	REACH	3	68	4	5		3643.0	1.7	1.3			
6	RUNOFF	1	67		6		0.19	60.0	0.89			1
6	RUNOFF	1	68		4		0.10	60.0	0.22			1

1

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

6	ADDHYD	4	49	3	5	7						
6	ADDHYD	4	49	7	6	3						
6	ADDHYD	4	49	3	4	5						1
6	REACH	3	66	5	3		2531.0	1.3	1.5			
6	RUNOFF	1	66		4		0.11	60.0	0.19			1
6	RUNOFF	1	69		5		0.23	60.0	1.42			1

6 REACH	3	19	3	2	3802.0	-0.1	1.7	
6 RUNOFF	1	19		6	0.29	60.0	0.51	1
6 ADDHYD	4		11	2 6 7				1
6 REACH	3	15	7	2	2571.0	0.3	1.6	
6 RUNOFF	1	16		3	0.38	60.0	0.89	1
6 REACH	3	17	3	4	3274.0	1.4	1.3	
6 RUNOFF	1	17		3	0.13	60.0	0.22	1
6 ADDHYD	4		10	3 4 5				1
6 REACH	3	115	5	3	2820.0	1.2	1.4	
6 RUNOFF	1	15		4	0.25	60.0	0.21	1
6 REACH	3	116	1	5	2260.0	0.2	1.6	
6 ADDHYD	4		9	2 3 1				
6 ADDHYD	4		9	1 5 2				
6 ADDHYD	4		9	2 4 1				
6 REACH	3	14	1	2	3448.0	0.2	1.7	
6 RUNOFF	1	14		1	0.35	60.0	0.44	1
6 ADDHYD	4		7	1 2 3				
6 REACH	3	5	3	1	4910.0	0.2	1.6	
6 RUNOFF	1	5		2	0.18	60.0	0.14	1
6 RUNOFF	1	36		3	0.39	62.0	0.96	1
6 REACH	3	20	3	4	3960.0	.4	1.5	
6 RUNOFF	1	20		3	0.30	52.0	0.30	1
6 ADDHYD	4		14	3 4 5				1
6 REACH	3	12	5	3	3221.0	1.3	1.5	
6 RUNOFF	1	10		4	0.13	64.0	0.18	1
6 REACH	3	112	4	5	2250.0	0.8	1.6	
6 RUNOFF	1	11		4	0.10	67.0	0.22	1
6 REACH	3	195	4	6	2788.0	1.4	1.5	
6 RUNOFF	1	12		4	0.22	60.0	0.14	1
6 ADDHYD	4		8	5 6 7				
6 ADDHYD	4		8	7 4 5				
6 ADDHYD	4		8	5 3 4				1
6 REACH	3	6	4	3	8976.0	0.6	1.6	
6 RUNOFF	1	6		4	0.29	51.0	0.23	1
6 RUNOFF	1	13		5	0.13	60.0	0.20	1
6 REACH	3	6	5	6	8976.0	0.6	1.6	
6 ADDHYD	4		5	1 2 5				
6 ADDHYD	4		5	5 3 1				

1

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

6 ADDHYD	4		5	1 6 2				
6 ADDHYD	4		5	2 4 1				1
6 REACH	3	4	1	2	2851.0	0.2	1.6	
6 RUNOFF	1	9		1	0.14	69.0	0.17	1
6 REACH	3	8	1	3	3907.0	6.0	1.4	
6 RUNOFF	1	8		1	0.19	61.0	0.07	1
6 RUNOFF	1	7		4	0.38	60.0	0.15	1
6 ADDHYD	4		6	3 1 5				
6 ADDHYD	4		6	5 4 1				1
6 REACH	3	104	1	3	4066.0	0.8	1.5	

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6 RUNOFF 1 4 1 0.59 60.0 0.32 1
6 ADDHYD 4 4 3 1 4
6 ADDHYD 4 4 4 2 1 1
6 REACH 3 3 1 2 2482.0 0.1 1.7
6 RUNOFF 1 3 1 0.16 54.0 0.03 1
6 ADDHYD 4 3 1 2 3 1
6 REACH 3 2 3 1 3432.0 0.2 1.7
6 RUNOFF 1 2 2 0.36 53.0 .50 1
6 ADDHYD 4 2 1 2 3 1
6 REACH 3 1 3 1 7234.0 0.3 1.7
6 RUNOFF 1 1 2 0.48 59.0 0.59 1
6 ADDHYD 4 1 1 2 3 1 1 1 1
ENDATA
7 LIST
7 INCREM 6 .100
7 COMPUT 7 80 1 0.0 4.5 1.01 2 01 01
ENDCMP 1
7 COMPUT 7 80 1 0.0 3.0 1.01 2 01 02
ENDCMP 1
ENDJOB 2

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0*****END OF 80-80

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 57	13.25		
+-----			
ALTERNATE 1		2327.06	437.16
0 STRUCTURE 56	.79		
+-----			
ALTERNATE 1		264.97	63.55
0 STRUCTURE 55	.95		
+-----			
ALTERNATE 1		382.37	100.37
0 STRUCTURE 54	.51		
+-----			
ALTERNATE 1		233.41	54.41
0 STRUCTURE 53	1.68		
+-----			
ALTERNATE 1		408.37	92.90
0 STRUCTURE 52	1.67		
+-----			
ALTERNATE 1		456.52	80.53
0 STRUCTURE 50	.32		

+	ALTERNATE	1		195.69	47.03
0	STRUCTURE	49	.71		
+	ALTERNATE	1		259.42	53.24
0	STRUCTURE	48	1.05		
+	ALTERNATE	1		302.95	64.80
0	STRUCTURE	47	.41		
+	ALTERNATE	1		97.23	21.20
0	STRUCTURE	46	.31		
+	ALTERNATE	1		82.43	17.85
0	STRUCTURE	45	.58		
+	ALTERNATE	1		231.49	56.32
0	STRUCTURE	44	1.37		
+	ALTERNATE	1		330.27	64.06
0	STRUCTURE	43	.62		
+	ALTERNATE	1		130.96	29.36
1					

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 42	1.86		
+			
ALTERNATE 1		433.01	74.19
0 STRUCTURE 41	1.84		
+			
ALTERNATE 1		434.47	97.80
0 STRUCTURE 40	4.60		
+			
ALTERNATE 1		954.16	205.67
0 STRUCTURE 39	.75		
+			
ALTERNATE 1		272.49	46.44
0 STRUCTURE 38	.35		

+	ALTERNATE	1		121.98	15.56
0	STRUCTURE	37	.48		
+	ALTERNATE	1		87.92	13.08
0	STRUCTURE	36	1.31		
+	ALTERNATE	1		386.19	67.25
0	STRUCTURE	35	5.39		
+	ALTERNATE	1		1113.35	250.03
0	STRUCTURE	34	1.50		
+	ALTERNATE	1		434.40	73.76
0	STRUCTURE	32	2.36		
+	ALTERNATE	1		521.98	89.25
0	STRUCTURE	31	1.76		
+	ALTERNATE	1		481.55	77.70
0	STRUCTURE	30	5.93		
+	ALTERNATE	1		1163.60	257.97
0	STRUCTURE	29	10.55		
+	ALTERNATE	1		2084.20	401.27
0	STRUCTURE	28	.69		
+	ALTERNATE	1		163.24	35.23
1					

TR20 XEQ 11/ 1/94 8:51 EXISTING CONDITION - E. FORK SAND CREEK TRIB. - ARIES
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 27	.89		
+			
ALTERNATE 1		183.35	35.18
0 STRUCTURE 26	1.03		
+			
ALTERNATE 1		218.59	42.83
0 STRUCTURE 25	1.45		

+-----			
ALTERNATE	1	340.71	66.45
0 STRUCTURE 24	.93		
+-----			
ALTERNATE	1	406.08	84.46
0 STRUCTURE 23	.32		
+-----			
ALTERNATE	1	219.32	83.63
0 STRUCTURE 22	.58		
+-----			
ALTERNATE	1	289.42	96.12
0 STRUCTURE 21	3.89		
+-----			
ALTERNATE	1	972.26	159.85
0 STRUCTURE 20	.40		
+-----			
ALTERNATE	1	229.87	61.78
0 STRUCTURE 19	11.19		
+-----			
ALTERNATE	1	2148.72	412.69
0 STRUCTURE 18	11.66		
+-----			
ALTERNATE	1	2179.35	413.62
0 STRUCTURE 17	11.92		
+-----			
ALTERNATE	1	2198.58	418.66
0 STRUCTURE 16	.50		
+-----			
ALTERNATE	1	351.97	64.99
0 STRUCTURE 15	5.20		
+-----			
ALTERNATE	1	1253.69	234.55
0 STRUCTURE 14	.69		
+-----			
ALTERNATE	1	138.66	31.79
1			

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 13	5.63		

+	ALTERNATE	1		1330.03	249.78
0	STRUCTURE	12	12.85		
+	ALTERNATE	1		2292.44	433.67
0	STRUCTURE	11	5.92		
+	ALTERNATE	1		1326.80	242.38
0	STRUCTURE	10	.51		
+	ALTERNATE	1		126.18	29.03
0	STRUCTURE	9	19.93		
+	ALTERNATE	1		3730.75	653.74
0	STRUCTURE	8	1.14		
+	ALTERNATE	1		428.92	104.80
0	STRUCTURE	7	20.28		
+	ALTERNATE	1		3756.19	656.88
0	STRUCTURE	6	.71		
+	ALTERNATE	1		807.35	210.75
0	STRUCTURE	5	22.02		
+	ALTERNATE	1		3896.75	683.17
0	STRUCTURE	4	23.32		
+	ALTERNATE	1		3951.46	696.11
0	STRUCTURE	3	23.48		
+	ALTERNATE	1		3956.75	695.56
0	STRUCTURE	2	23.84		
+	ALTERNATE	1		3969.81	696.41
0	STRUCTURE	1	24.32		
+	ALTERNATE	1		3974.93	697.32
0	XSECTION	1	.48		
+	ALTERNATE	1		203.68	42.55

1

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 2	.36		
+			
ALTERNATE 1		97.67	7.92
0 XSECTION 3	.16		
+			
ALTERNATE 1		143.24	25.63
0 XSECTION 4	.59		
+			
ALTERNATE 1		419.84	98.73
0 XSECTION 5	.18		
+			
ALTERNATE 1		175.30	44.49
0 XSECTION 6	.29		
+			
ALTERNATE 1		104.36	3.46
0 XSECTION 7	.38		
+			
ALTERNATE 1		361.68	90.79
0 XSECTION 8	.19		
+			
ALTERNATE 1		242.25	74.69
0 XSECTION 9	.14		
+			
ALTERNATE 1		210.75	82.57
0 XSECTION 10	.13		
+			
ALTERNATE 1		148.18	47.44
0 XSECTION 11	.10		
+			
ALTERNATE 1		124.62	46.31
0 XSECTION 12	.22		
+			
ALTERNATE 1		214.26	54.37
0 XSECTION 13	.13		
+			
ALTERNATE 1		110.28	28.66
0 XSECTION 14	.35		
+			
ALTERNATE 1		198.76	45.80
0 XSECTION 15	.25		
+			
ALTERNATE 1		210.35	54.24

1

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 16	.38		
+			
ALTERNATE 1		126.45	28.98
0 XSECTION 17	.13		
+			
ALTERNATE 1		108.43	27.85
0 XSECTION 18	.40		
+			
ALTERNATE 1		113.74	19.75
0 XSECTION 19	.29		
+			
ALTERNATE 1		149.65	33.45
0 XSECTION 20	.30		
+			
ALTERNATE 1		104.21	5.93
0 XSECTION 21	.10		
+			
ALTERNATE 1		58.50	15.15
0 XSECTION 22	.13		
+			
ALTERNATE 1		175.23	57.05
0 XSECTION 23	.20		
+			
ALTERNATE 1		55.27	10.79
0 XSECTION 24	.28		
+			
ALTERNATE 1		189.65	31.40
0 XSECTION 25	.26		
+			
ALTERNATE 1		194.71	46.95
0 XSECTION 26	.47		
+			
ALTERNATE 1		53.56	2.87
0 XSECTION 27	.15		
+			
ALTERNATE 1		113.93	27.69
0 XSECTION 28	.32		
+			
ALTERNATE 1		204.59	47.21
0 XSECTION 29	.17		
+			
ALTERNATE 1		76.77	20.02

TR20 XEQ 11/ 1/94 8:51 EXISTING CONDITION - E. FORK SAND CREEK TRIB. - ARIES
 PROPERTIES efsc JOB 1 SUMMARY
 REV PC/09/83 24 HR TYPE IIA CURVE
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 30	.10		
+			
ALTERNATE 1		131.09	41.95
0 XSECTION 31	.24		
+			
ALTERNATE 1		227.13	61.64
0 XSECTION 32	.15		
+			
ALTERNATE 1		22.11	1.84
0 XSECTION 33	.50		
+			
ALTERNATE 1		110.05	24.21
0 XSECTION 34	.23		
+			
ALTERNATE 1		123.13	32.16
0 XSECTION 35	.26		
+			
ALTERNATE 1		102.91	26.84
0 XSECTION 36	.39		
+			
ALTERNATE 1		143.15	37.39
0 XSECTION 37	.20		
+			
ALTERNATE 1		176.07	72.53
0 XSECTION 38	.12		
+			
ALTERNATE 1		46.54	12.18
0 XSECTION 39	.48		
+			
ALTERNATE 1		270.89	62.33
0 XSECTION 40	.14		
+			
ALTERNATE 1		39.16	9.13
0 XSECTION 41	.16		
+			
ALTERNATE 1		47.62	8.13

0 XSECTION	42	.20		
+				
ALTERNATE	1		73.16	7.83
0 XSECTION	43	.16		
+				
ALTERNATE	1		70.31	11.97
1				

TR20 XEQ 11/ 1/94 8:51 EXISTING CONDITION - E. FORK SAND CREEK TRIB. - ARIES
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 44	.29		
+			
ALTERNATE 1		234.44	59.07
0 XSECTION 45	.50		
+			
ALTERNATE 1		338.32	77.42
0 XSECTION 46	.26		
+			
ALTERNATE 1		109.27	24.65
0 XSECTION 47	.62		
+			
ALTERNATE 1		202.63	46.48
0 XSECTION 48	.27		
+			
ALTERNATE 1		63.63	15.08
0 XSECTION 49	.28		
+			
ALTERNATE 1		98.10	14.69
0 XSECTION 50	.36		
+			
ALTERNATE 1		192.66	42.99
0 XSECTION 51	.11		
+			
ALTERNATE 1		87.34	13.07
0 XSECTION 52	.19		
+			
ALTERNATE 1		121.48	28.03
0 XSECTION 53	.33		
+			
ALTERNATE 1		186.23	42.86

0 XSECTION	54	.31		
+-----				
ALTERNATE	1		78.21	21.08
0 XSECTION	55	.17		
+-----				
ALTERNATE	1		60.37	15.82
0 XSECTION	56	.09		
+-----				
ALTERNATE	1		64.26	17.13
0 XSECTION	57	.18		
+-----				
ALTERNATE	1		45.91	10.81
1				

TR20 XEQ 11/ 1/94 8:51 EXISTING CONDITION - E. FORK SAND CREEK TRIB. - ARIES
 PROPERTIES efsc JOB 1 SUMMARY
 REV PC/09/83 24 HR TYPE IIA CURVE
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 58	.28		
+-----			
ALTERNATE 1		135.24	30.94
0 XSECTION 59	.32		
+-----			
ALTERNATE 1		116.72	14.61
0 XSECTION 60	.08		
+-----			
ALTERNATE 1		78.91	23.04
0 XSECTION 61	.35		
+-----			
ALTERNATE 1		214.29	53.26
0 XSECTION 62	.25		
+-----			
ALTERNATE 1		215.74	55.62
0 XSECTION 63	.06		
+-----			
ALTERNATE 1		24.92	5.62
0 XSECTION 64	.20		
+-----			
ALTERNATE 1		88.13	19.75
0 XSECTION 65	.07		
+-----			
ALTERNATE 1		35.33	8.01

0 XSECTION	66	.11		
+				
ALTERNATE	1		94.92	24.47
0 XSECTION	67	.19		
+				
ALTERNATE	1		63.22	14.49
0 XSECTION	68	.10		
+				
ALTERNATE	1		83.41	21.42
0 XSECTION	69	.23		
+				
ALTERNATE	1		53.12	12.59
0 XSECTION	70	.26		
+				
ALTERNATE	1		87.05	19.93
0 XSECTION	71	.13		
+				
ALTERNATE	1		50.16	11.35
1				

TR20 XEQ 11/ 1/94 8:51 EXISTING CONDITION - E. FORK SAND CREEK TRIB. - ARIES
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 72	.29		
+			
ALTERNATE 1		97.10	22.23
0 XSECTION 73	.28		
+			
ALTERNATE 1		59.93	14.36
0 XSECTION 74	.19		
+			
ALTERNATE 1		159.86	41.22
0 XSECTION 75	.16		
+			
ALTERNATE 1		64.89	14.66
0 XSECTION 76	.24		
+			
ALTERNATE 1		162.39	37.16
0 XSECTION 77	.23		
+			
ALTERNATE 1		46.56	11.20

0 XSECTION	78	.37		
+				
ALTERNATE	1		53.51	8.20
0 XSECTION	79	.28		
+				
ALTERNATE	1		120.26	15.46
0 XSECTION	80	.07		
+				
ALTERNATE	1		26.79	3.44
0 XSECTION	81	.38		
+				
ALTERNATE	1		231.83	54.37
0 XSECTION	82	.25		
+				
ALTERNATE	1		179.92	42.65
0 XSECTION	83	.34		
+				
ALTERNATE	1		74.70	17.83
0 XSECTION	84	.27		
+				
ALTERNATE	1		202.20	48.75
0 XSECTION	85	.19		
+				
ALTERNATE	1		126.04	28.77
1				

TR20 XEQ 11/ 1/94 8:51 EXISTING CONDITION - E. FORK SAND CREEK TRIB. - ARIES
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 86	.33		
+			
ALTERNATE 1		74.08	17.68
0 XSECTION 87	.15		
+			
ALTERNATE 1		36.22	8.56
0 XSECTION 88	.26		
+			
ALTERNATE 1		194.71	46.95
0 XSECTION 89	.10		
+			
ALTERNATE 1		55.87	12.82

0 XSECTION	90	.06		
+				
ALTERNATE	1		26.44	5.92
0 XSECTION	91	.42		
+				
ALTERNATE	1		115.21	26.84
0 XSECTION	92	.34		
+				
ALTERNATE	1		258.24	62.77
0 XSECTION	93	.26		
+				
ALTERNATE	1		84.37	22.26
0 XSECTION	94	.40		
+				
ALTERNATE	1		338.85	93.80
0 XSECTION	95	.14		
+				
ALTERNATE	1		33.06	7.84
0 XSECTION	96	.13		
+				
ALTERNATE	1		43.53	9.96
0 XSECTION	97	.13		
+				
ALTERNATE	1		75.27	17.48
0 XSECTION	98	.16		
+				
ALTERNATE	1		114.71	32.65
0 XSECTION	99	.45		
+				
ALTERNATE	1		123.44	28.76

1END OF 1 JOBS IN THIS RUN

Technical Addendum

TR 20 Input/Output for the East Fork Sand Creek

Future Basin Conditions, 10- and 100-year

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

JOB TR-20

NOPLOTS

TITLE 001 FUTURE CONDITION - E. FORK SAND CREEK TRIB. - ARIES PROPERTIES EFSCFU

TITLE 24 HR TYPE IIA CURVE

5	RAINFL	1			.50				
8					0.000	.0025	0.005	.0075	0.010
8					0.015	0.020	0.025	0.030	0.050
8					0.060	0.100	0.700	0.750	0.780
8					0.798	0.820	0.830	0.840	0.850
8					0.860	0.865	0.870	0.885	0.890
8					0.900	0.905	0.910	0.915	0.921
8					0.927	0.933	0.940	0.945	0.950
8					0.955	0.960	0.965	0.970	0.975
8					0.980	0.983	0.985	0.988	0.990
8					0.993	0.995	0.998	1.000	1.000
9	ENDTBL								
6	RUNOFF	1	80	1		0.07	68.0	0.41	1
6	REACH	3	79	1	2	5597.0	1.7	1.25	
6	RUNOFF	1	79	1		0.28	70.0	0.35	1
6	ADDHYD	4	38	1	2	3			1
6	REACH	3	150	3	1	6574.0	1.1	1.4	
6	RUNOFF	1	78		2	0.37	77.0	1.47	1
6	REACH	3	51	2	3	1531.0	1.0	1.4	
6	RUNOFF	1	51		4	0.11	71.0	0.09	1
6	ADDHYD	4	37	3	4	2			1
6	REACH	3	50	2	3	3000.0	1.1	1.4	
6	RUNOFF	1	50		2	0.36	74.0	0.49	1
6	RUNOFF	1	49		4	0.28	68.0	0.53	1
6	REACH	3	152	4	5	2682.0	1.0	1.4	
6	ADDHYD	4	33	2	5	6			
6	ADDHYD	4	33	6	1	5			
6	ADDHYD	4	33	5	3	1			
6	REACH	3	47	1	2	4678.0	0.2	1.7	
6	RUNOFF	1	48		1	0.27	68.0	1.39	1
6	REACH	3	147	1	3	6040.0	1.1	1.4	
6	RUNOFF	1	47		1	0.62	78.0	0.91	1
6	ADDHYD	4	32	1	3	4			
6	ADDHYD	4	32	4	2	1			1
6	REACH	3	145	1	2	3802.0	0.2	1.7	
6	RUNOFF	1	45		1	0.500	84.0	0.34	1
6	ADDHYD	4	29	1	2	3			1
6	RUNOFF	1	81		1	0.38	69.0	0.39	1
6	RUNOFF	1	96		2	0.13	68.0	0.88	1
6	REACH	3	81	2	4	6389.0	1.4	1.3	
6	ADDHYD	4	54	4	1	2			1
6	REACH	3	76	2	1	5702.0	1.9	1.3	
6	RUNOFF	1	76		2	0.24	81.0	0.34	1

1

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

6	ADDHYD	4	39	1	2	4					1
6	REACH	3	53	4	1		3453.0	1.1	1.4		
6	RUNOFF	1	53		2		0.33	75.0	0.45		1
6	RUNOFF	1	77		4		0.23	83.0	1.68		1
6	REACH	3	153	4	5		3379.0	.7	1.4		
6	ADDHYD	4	36	1	2	4					
6	ADDHYD	4	36	4	5	1					1
6	REACH	3	52	1	2		1584.0	0.3	1.6		
6	RUNOFF	1	52		1		0.19	78.0	0.37		1
6	ADDHYD	4	34	2	1	4					1
6	REACH	3	46	4	1		3770.0	0.3	1.6		
6	RUNOFF	1	46		2		0.26	80.0	0.66		1
6	ADDHYD	4	31	1	2	4					1
6	REACH	3	145	4	1		3600	0.2	1.7		
6	ADDHYD	4	29	1	3	2					1
6	RUNOFF	1	93		1		0.26	76.0	1.12		1
6	RUNOFF	1	94		3		0.40	68.0	0.30		1
6	RUNOFF	1	98		4		0.16	63.0	0.43		1
6	REACH	3	194	4	5		5914.0	1.8	1.3		
6	RUNOFF	1	97		4		0.13	63.0	0.43		1
6	REACH	3	94	4	6		5914.0	1.7	1.3		
6	ADDHYD	4	55	1	3	7					
6	ADDHYD	4	55	7	5	1					
6	ADDHYD	4	55	1	6	3					1
6	REACH	3	83	3	1		6124.0	1.9	1.3		
6	RUNOFF	1	83		3		0.34	73.0	1.52		1
6	RUNOFF	1	95		4		0.14	68.0	1.38		1
6	REACH	3	82	4	5		5808.0	1.4	1.3		
6	RUNOFF	1	82		4		0.25	86.0	0.31		1
6	ADDHYD	4	53	1	3	6					
6	ADDHYD	4	53	6	5	1					
6	ADDHYD	4	53	1	4	3					1
6	REACH	3	75	3	1		4013.0	1.9	1.3		
6	RUNOFF	1	75		3		0.16	79.0	0.69		1
6	ADDHYD	4	41	1	3	4					1
6	REACH	3	73	4	1		1610.0	0.8	1.5		
6	RUNOFF	1	73		3		0.28	81.0	1.57		1
6	ADDHYD	4	40	1	3	4					1
6	RUNOFF	1	99		1		0.45	68.0	1.14		1
6	REACH	3	92	1	3		5650.0	2.1	1.3		
6	RUNOFF	1	92		5		0.34	88.0	0.28		1
6	ADDHYD	4	56	3	5	1					1
6	REACH	3	84	1	3		5491.0	2.0	1.3		
6	RUNOFF	1	84		5		0.27	92.0	0.29		1
6	ADDHYD	4	52	3	5	1					1
6	RUNOFF	1	91		3		0.42	92.0	1.14		1

1

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

6	REACH	3	85	3	5		6178.0	1.4	1.3		
6	ADDHYD	4	52	1	5	3					1

6	RUNOFF	1	85	1	0.19	92.0	0.36	1
6	ADDHYD	4	52	1 3 5				1
6	REACH	3	74	5 6	4066.0	1.9	1.3	
6	RUNOFF	1	74	1	0.19	87.0	0.21	1
6	ADDHYD	4	42	1 6 5				1
6	REACH	3	73	5 1	1610.0	0.8	1.5	
6	ADDHYD	4	40	1 4 3				
6	RUNOFF	1	86	1	0.33	80.0	1.48	1
6	REACH	3	72	1 4	3500.0	1.7	1.3	
6	RUNOFF	1	72	1	0.29	84.0	0.88	1
6	ADDHYD	4	43	1 4 5				1
6	REACH	3	173	5 1	1864.0	2.0	1.3	
6	ADDHYD	4	40	1 3 4				1
6	RUNOFF	1	71	1	0.13	85.0	0.75	1
6	REACH	3	57	1 3	4102.0	.7	1.4	
6	RUNOFF	1	57	1	0.18	79.0	1.25	1
6	ADDHYD	4	46	1 3 5				1
6	REACH	3	55	5 1	3000.0	2.9	1.4	
6	RUNOFF	1	55	3	0.17	86.0	1.00	1
6	RUNOFF	1	54	5	0.31	76.0	1.54	1
6	REACH	3	54	4 6	4974.0	0.5	1.6	
6	ADDHYD	4	35	6 1 4				
6	ADDHYD	4	35	4 3 1				
6	ADDHYD	4	35	1 5 3				1
6	REACH	3	44	3 1	5016.0	0.5	1.6	
6	RUNOFF	1	56	3	0.09	84.0	0.39	1
6	REACH	3	144	3 4	4419.0	.9	1.6	
6	RUNOFF	1	43	5	0.16	86.0	0.45	1
6	REACH	3	146	5 3	1200	1.9	1.3	
6	RUNOFF	1	44	5	0.29	83.0	0.24	1
6	ADDHYD	4	30	3 4 6				
6	ADDHYD	4	30	6 1 3				
6	ADDHYD	4	30	3 5 1			1 1 1	1
6	REACH	3	45	1 3	2893.0	0.1	1.7	
6	ADDHYD	4	29	2 3 1			1 1 1	1
6	REACH	3	28	1 2	3168.0	0.1	1.7	
6	RUNOFF	1	29	3	0.17	90.0	0.73	1
6	REACH	3	128	3 1	3131.0	0.5	1.5	
6	RUNOFF	1	27	3	0.15	86.0	0.28	1
6	RUNOFF	1	28	4	0.32	83.0	0.37	1
6	ADDHYD	4	19	2 1 5				
6	ADDHYD	4	19	5 3 1				
6	ADDHYD	4	19	1 4 2			1 1 1	1
6	REACH	3	26	2 1	3221.0	0.2	1.7	

1

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

6	RUNOFF	1	26	2	0.47	81.0	0.90	1
6	ADDHYD	4	18	1 2 3				1
6	REACH	3	25	3 1	2323.0	0.2	1.7	
6	RUNOFF	1	25	2	0.26	74.0	0.29	1

6	ADDHYD	4	17	1	2	3					1
6	REACH	3	24	3	1		2524.0	0.2	1.7		
6	RUNOFF	1	24		2		0.28	88.0	0.16		1
6	ADDHYD	4	12	1	2	3					
6	RUNOFF	1	41		1		0.16	95.0	0.75		1
6	REACH	3	31	1	2		3358.0	1.1	1.5		
6	RUNOFF	1	31		1		0.24	86.0	0.18		1
6	ADDHYD	4	20	1	2	4					1
6	REACH	3	30	4	1		2323.0	1.6	1.6		
6	RUNOFF	1	30		2		0.10	83.0	0.08		1
6	ADDHYD	4	16	1	2	4					1
6	REACH	3	124	4	1		4594.0	0.7	1.6		
6	RUNOFF	1	32		2		0.15	82.0	0.91		1
6	REACH	3	198	2	4		5227.0	1.2	1.6		
6	ADDHYD	4	12	1	4	2					
6	ADDHYD	4	12	2	3	1					1
6	REACH	3	18	1	2		3696.0	0.2	1.7		
6	RUNOFF	1	18		7		0.40	83.0	0.78		1
6	ADDHYD	4	57	2	7	1			1	1	1
6	RUNOFF	1	87		2		0.15	68.0	1.35		1
6	REACH	3	70	2	3		5613.0	1.2	1.3		
6	RUNOFF	1	70		2		0.26	81.0	0.88		
6	ADDHYD	4	47	2	3	4					1
6	REACH	3	58	4	2		5016.0	1.6	1.3		
6	RUNOFF	1	58		3		0.28	79.0	0.55		
6	ADDHYD	4	28	2	3	4					1
6	REACH	3	42	4	2		2746.0	1.2	1.4		
6	RUNOFF	1	42		3		0.20	84.0	0.37		
6	ADDHYD	4	27	2	3	4					1
6	REACH	3	40	4	2		2218.0	1.2	1.4		
6	RUNOFF	1	40		3		0.14	72.0	1.11		
6	ADDHYD	4	26	2	3	4					1
6	REACH	3	199	4	2		216.0	.3	1.6		
6	RUNOFF	1	90		3		0.06	92.0	0.63		
6	REACH	3	88	3	4		5597.0	1.9	1.3		
6	RUNOFF	1	88		3		0.26	68.0	0.29		
6	ADDHYD	4	50	3	4	5					1
6	REACH	3	68	5	3		3643.0	1.7	1.3		
6	RUNOFF	1	89		4		0.10	68.0	0.46		
6	REACH	3	68	4	5		3643.0	1.7	1.3		
6	RUNOFF	1	67		6		0.19	75.0	0.89		
6	RUNOFF	1	68		4		0.10	74.0	0.22		

1

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

6	ADDHYD	4	49	3	5	7					
6	ADDHYD	4	49	7	6	3					
6	ADDHYD	4	49	3	4	5					
6	REACH	3	66	5	3		2531.0	1.3	1.5		
6	RUNOFF	1	66		4		0.11	74.0	0.19		
6	RUNOFF	1	69		5		0.23	74.0	1.42		

6 REACH	3	19	3	2	3802.0	0.1	1.7		
6 RUNOFF	1	19		6	0.29	89.0	0.51		
6 ADDHYD	4		11	2 6 7					1
6 REACH	3	15	7	2	2571.0	0.3	1.6		
6 RUNOFF	1	16		3	0.38	84.0	0.89		
6 REACH	3	17	3	4	3274.0	1.4	1.3		
6 RUNOFF	1	17		3	0.13	84.0	0.22		
6 ADDHYD	4		10	3 4 5					1
6 REACH	3	115	5	3	2820.0	1.2	1.4		
6 RUNOFF	1	15		4	0.25	92.0	0.21		
6 REACH	3	116	1	5	2260.0	0.2	1.6		
6 ADDHYD	4		9	2 3 1					
6 ADDHYD	4		9	1 5 2					
6 ADDHYD	4		9	2 4 1				1 1 1 1	
6 REACH	3	14	1	2	3448.0	0.2	1.7		
6 RUNOFF	1	14		1	0.35	92.0	0.44		
6 ADDHYD	4		7	1 2 3				1 1 1 1	
6 REACH	3	5	3	1	4910.0	0.2	1.6		
6 RUNOFF	1	5		2	0.18	68.0	0.14		
6 RUNOFF	1	36		3	0.39	82.0	0.96		
6 REACH	3	20	3	4	3960.0	.4	1.5		
6 RUNOFF	1	20		3	0.30	85.0	0.30		
6 ADDHYD	4		14	3 4 5					1
6 REACH	3	12	5	3	3221.0	1.3	1.5		
6 RUNOFF	1	10		4	0.13	77.0	0.18		
6 REACH	3	112	4	5	2250.0	0.8	1.6		
6 RUNOFF	1	11		4	0.10	81.0	0.22		
6 REACH	3	195	4	6	2788.0	1.4	1.5		
6 RUNOFF	1	12		4	0.22	87.0	0.14		
6 ADDHYD	4		8	5 6 7					
6 ADDHYD	4		8	7 4 5					
6 ADDHYD	4		8	5 3 4					
6 REACH	3	6	4	3	8976.0	0.6	1.6		
6 RUNOFF	1	6		4	0.29	86.0	0.23		
6 RUNOFF	1	13		5	0.13	87.0	0.20		
6 REACH	3	6	5	6	8976.0	0.6	1.6		
6 ADDHYD	4		5	1 2 5					
6 ADDHYD	4		5	5 3 1					

1

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

6 ADDHYD	4		5	1 6 2					
6 ADDHYD	4		5	2 4 1					1
6 REACH	3	4	1	2	2851.0	0.2	1.6		
6 RUNOFF	1	9		1	0.14	77.0	0.17		
6 REACH	3	8	1	3	3907.0	6.0	1.4		
6 RUNOFF	1	8		1	0.19	77.0	0.07		
6 RUNOFF	1	7		4	0.38	92.0	0.15		
6 ADDHYD	4		6	3 1 5					
6 ADDHYD	4		6	5 4 1					1
6 REACH	3	104	1	3	4066.0	0.8	1.5		

6	RUNOFF	1	4	1	0.59	79.0	0.32		
6	ADDHYD	4	4	3 1 4					
6	ADDHYD	4	4	4 2 1					1
6	REACH	3	3	1 2	2482.0	0.1	1.7		
6	RUNOFF	1	3	1	0.16	86.0	0.03		
6	ADDHYD	4	3	1 2 3					1
6	REACH	3	2	3 1	3432.0	0.2	1.7		
6	RUNOFF	1	2	2	0.36	87.0	.50		
6	ADDHYD	4	2	1 2 3					1
6	REACH	3	1	3 1	7234.0	0.3	1.7		
6	RUNOFF	1	1	2	0.48	74.0	0.59		
6	ADDHYD	4	1	1 2 3				1 1 1 1	

ENDATA

7 LIST

7	INCREM	6		.100					
7	COMPUT	7	80	1	0.0	4.5	1.01 2	01	01

ENDCMP 1

7	COMPUT	7	80	1	0.0	3.0	1.01 2	01	02
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ENDCMP 1

ENDJOB 2

0*****END OF 80-80

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 57	13.25		
+-----			
ALTERNATE 1		9380.66	4159.64
0 STRUCTURE 56	.79		
+-----			
ALTERNATE 1		908.24	513.01
0 STRUCTURE 55	.95		
+-----			
ALTERNATE 1		578.03	208.89
0 STRUCTURE 54	.51		
+-----			
ALTERNATE 1		424.46	152.28
0 STRUCTURE 53	1.68		
+-----			
ALTERNATE 1		920.47	409.07
0 STRUCTURE 52	1.67		
+-----			
ALTERNATE 1		2123.02	1207.83
0 STRUCTURE 50	.32		
+-----			
ALTERNATE 1		370.33	146.67
0 STRUCTURE 48	1.05		
+-----			
ALTERNATE 1		710.04	262.76
0 STRUCTURE 47	.41		
+-----			
ALTERNATE 1		304.02	143.02
0 STRUCTURE 46	.31		
+-----			
ALTERNATE 1		297.63	142.77
0 STRUCTURE 44	1.37		
+-----			
ALTERNATE 1		862.57	273.03
0 STRUCTURE 43	.62		
+-----			
ALTERNATE 1		476.47	232.90
0 STRUCTURE 42	1.86		
+-----			
ALTERNATE 1		2231.32	1229.48
0 STRUCTURE 41	.184		
+-----			
ALTERNATE 1		1049.46	451.68

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 40	4.60		
+ _____			
ALTERNATE 1		3567.56	1821.65
0 STRUCTURE 39	.75		
+ _____			
ALTERNATE 1		676.50	286.54
0 STRUCTURE 38	.35		
+ _____			
ALTERNATE 1		352.66	132.44
0 STRUCTURE 37	.48		
+ _____			
ALTERNATE 1		240.45	106.69
0 STRUCTURE 36	1.31		
+ _____			
ALTERNATE 1		1052.48	438.39
0 STRUCTURE 35	5.39		
+ _____			
ALTERNATE 1		4046.74	2023.90
0 STRUCTURE 34	1.50		
+ _____			
ALTERNATE 1		1319.94	514.22
0 STRUCTURE 32	2.36		
+ _____			
ALTERNATE 1		1517.56	575.07
0 STRUCTURE 31	1.76		
+ _____			
ALTERNATE 1		1586.88	602.91
0 STRUCTURE 30	5.93		
+ _____			
ALTERNATE 1		4333.52	2147.35
0 STRUCTURE 29	10.55		
+ _____			
ALTERNATE 1		7455.69	3329.73
0 STRUCTURE 28	.69		
+ _____			
ALTERNATE 1		527.35	240.17
0 STRUCTURE 27	.89		
+ _____			
ALTERNATE 1		753.00	349.25
0 STRUCTURE 26	1.03		

+	ALTERNATE	1	816.41	368.37
1				

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 25	1.45		
+			
ALTERNATE 1		883.93	276.36
0 STRUCTURE 23	.32		
+			
ALTERNATE 1		401.91	207.07
0 STRUCTURE 22	.58		
+			
ALTERNATE 1		778.36	426.10
0 STRUCTURE 21	3.89		
+			
ALTERNATE 1		2503.69	822.63
0 STRUCTURE 20	.40		
+			
ALTERNATE 1		796.80	448.01
0 STRUCTURE 19	11.19		
+			
ALTERNATE 1		7852.37	3487.81
0 STRUCTURE 18	11.66		
+			
ALTERNATE 1		8301.19	3676.79
0 STRUCTURE 17	11.92		
+			
ALTERNATE 1		8357.99	3698.87
0 STRUCTURE 16	.50		
+			
ALTERNATE 1		1076.86	599.88
0 STRUCTURE 15	5.20		
+			
ALTERNATE 1		3541.44	1367.13
0 STRUCTURE 14	.69		
+			
ALTERNATE 1		798.95	419.16
0 STRUCTURE 13	5.63		

+	ALTERNATE	1		3978.23	1593.03
0	STRUCTURE	12	12.85		
+	ALTERNATE	1		8988.42	4027.75
0	STRUCTURE	11	5.92		
+	ALTERNATE	1		4099.22	1632.54
1					

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 STRUCTURE 10	.51		
+			
ALTERNATE 1		481.72	242.11
0 STRUCTURE 9	19.93		
+			
ALTERNATE 1		13986.72	6050.57
0 STRUCTURE 7	20.28		
+			
ALTERNATE 1		14188.40	6124.02
0 STRUCTURE 6	.71		
+			
ALTERNATE 1		2029.29	1107.72
0 STRUCTURE 5	22.02		
+			
ALTERNATE 1		14911.56	6422.06
0 STRUCTURE 4	23.32		
+			
ALTERNATE 1		15195.26	6531.64
0 STRUCTURE 3	23.48		
+			
ALTERNATE 1		15219.79	6546.61
0 STRUCTURE 2	23.84		
+			
ALTERNATE 1		15397.17	6596.62
0 STRUCTURE 1	24.32		
+			
ALTERNATE 1		15602.47	6619.45
0 XSECTION 18	.40		

+	ALTERNATE	1		528.64	264.87
0	XSECTION	24	.28		
+	ALTERNATE	1		840.31	487.68
0	XSECTION	25	.26		
+	ALTERNATE	1		419.76	184.33
0	XSECTION	26	.47		
+	ALTERNATE	1		522.01	251.12
0	XSECTION	27	.15		
+	ALTERNATE	1		372.70	208.86
1					

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 28	.32		
+			
ALTERNATE 1		662.11	342.60
0 XSECTION 29	.17		
+			
ALTERNATE 1		306.60	174.94
0 XSECTION 30	.10		
+			
ALTERNATE 1		292.63	161.29
0 XSECTION 31	.24		
+			
ALTERNATE 1		668.29	374.27
0 XSECTION 32	.15		
+			
ALTERNATE 1		169.89	83.38
0 XSECTION 41	.16		
+			
ALTERNATE 1		340.58	211.23
0 XSECTION 43	.16		
+			
ALTERNATE 1		337.51	182.20
0 XSECTION 44	.29		

+	ALTERNATE	1		682.33	359.40
0	XSECTION	45	.50		
+	ALTERNATE	1		1108.88	587.09
0	XSECTION	46	.26		
+	ALTERNATE	1		340.72	161.98
0	XSECTION	47	.62		
+	ALTERNATE	1		589.12	265.69
0	XSECTION	48	.27		
+	ALTERNATE	1		109.35	37.93
0	XSECTION	49	.28		
+	ALTERNATE	1		240.19	83.89
0	XSECTION	50	.36		
+	ALTERNATE	1		443.22	187.55
1					

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 51	.11		
+			
ALTERNATE 1		215.21	93.95
0 XSECTION 52	.19		
+			
ALTERNATE 1		324.74	152.59
0 XSECTION 53	.33		
+			
ALTERNATE 1		447.98	193.78
0 XSECTION 54	.31		
+			
ALTERNATE 1		176.01	76.29
0 XSECTION 55	.17		
+			
ALTERNATE 1		212.27	111.98
0 XSECTION 56	.09		

+-----				
ALTERNATE	1		188.50	98.96
0 XSECTION	57	.18		
+-----				
ALTERNATE	1		139.06	64.18
0 XSECTION	71	.13		
+-----				
ALTERNATE	1		195.80	101.98
0 XSECTION	72	.29		
+-----				
ALTERNATE	1		365.22	186.22
0 XSECTION	73	.28		
+-----				
ALTERNATE	1		196.67	94.56
0 XSECTION	74	.19		
+-----				
ALTERNATE	1		524.06	296.24
0 XSECTION	75	.16		
+-----				
ALTERNATE	1		194.67	90.57
0 XSECTION	76	.24		
+-----				
ALTERNATE	1		478.45	240.02
0 XSECTION	77	.23		
+-----				
ALTERNATE	1		165.98	82.84
1				

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 78	.37		
+-----			
ALTERNATE 1		228.92	101.31
0 XSECTION 79	.28		
+-----			
ALTERNATE 1		343.50	132.41
0 XSECTION 80	.07		
+-----			
ALTERNATE 1		70.29	24.81
0 XSECTION 81	.38		

+-----				
ALTERNATE	1		415.50	151.50
0 XSECTION	82	.25		
+-----				
ALTERNATE	1		612.72	337.39
0 XSECTION	83	.34		
+-----				
ALTERNATE	1		168.42	67.89
0 XSECTION	84	.27		
+-----				
ALTERNATE	1		789.72	477.94
0 XSECTION	85	.19		
+-----				
ALTERNATE	1		533.08	321.56
0 XSECTION	86	.33		
+-----				
ALTERNATE	1		233.45	109.91
0 XSECTION	87	.15		
+-----				
ALTERNATE	1		62.33	21.59
0 XSECTION	91	.42		
+-----				
ALTERNATE	1		588.90	345.73
0 XSECTION	92	.34		
+-----				
ALTERNATE	1		897.75	511.02
0 XSECTION	93	.26		
+-----				
ALTERNATE	1		191.42	82.66
0 XSECTION	94	.40		
+-----				
ALTERNATE	1		481.55	177.09
1				

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
0 XSECTION 95	.14		
+-----			
ALTERNATE 1		56.86	19.71
0 XSECTION 96	.13		

+-----				
ALTERNATE	1		75.41	25.89
0 XSECTION	97	.13		
+-----				
ALTERNATE	1		93.20	26.53
0 XSECTION	98	.16		
+-----				
ALTERNATE	1		114.71	32.65
0 XSECTION	99	.45		
+-----				
ALTERNATE	1		213.36	73.51
1END OF 1 JOBS IN THIS RUN				