

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 62	RUNOFF	.18	7	2	.05	.0	3.10	24.00	1.63	---	6.04	284.94	1600.8	
XSECTION 63	REACH	.18	7	2	.05	.0	3.10	24.00	1.63	---	6.04	284.94	1600.8	
XSECTION 63	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.78	---	6.09	196.27	1498.2	
XSECTION 63	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.69	---	6.05	476.45	1541.9	
XSECTION 63	ADDHYD	.93	7	2	.05	.0	3.10	24.00	1.30	---	6.09	1028.60	1101.3	
XSECTION 64	REACH	.93	7	2	.05	.0	3.10	24.00	1.30	---	6.14	1017.88	1089.8	
XSECTION 64	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.48	---	6.14	122.43	1155.0	
XSECTION 64	ADDHYD	1.04	7	2	.05	.0	3.10	24.00	1.32	---	6.14	1140.29	1096.4	
XSECTION 65	REACH	1.04	7	2	.05	.0	3.10	24.00	1.32	---	6.21	1119.75	1076.7	
XSECTION 65	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.98	---	6.10	80.85	860.1	
XSECTION 65	ADDHYD	1.13	7	2	.05	.0	3.10	24.00	1.29	---	6.20	1183.13	1043.3	
XSECTION 66	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.78	---	6.09	173.79	1498.2	
XSECTION 66	ADDHYD	1.25	7	2	.05	.0	3.10	24.00	1.34	---	6.19	1330.57	1064.5	
XSECTION 67	REACH	1.25	7	2	.05	.0	3.10	24.00	1.33	---	6.27	1286.30	1029.0	
XSECTION 67	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.04	---	6.12	138.65	845.4	
XSECTION 67	ADDHYD	1.41	7	2	.05	.0	3.10	24.00	1.30	---	6.26	1387.14	981.0	
XSECTION 68	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.95	---	6.03	200.78	1842.0	
XSECTION 68	ADDHYD	1.52	7	2	.05	.0	3.10	24.00	1.35	---	6.24	1468.51	964.2	
XSECTION 68	ADDHYD	7.53	7	2	.05	.0	3.10	24.00	.98	---	6.31	2680.74	356.0	
XSECTION 69	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.34	---	6.12	115.35	1088.2	
XSECTION 70	REACH	.11	7	2	.05	.0	3.10	24.00	1.34	---	6.21	109.09	1029.1	
XSECTION 70	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.10	161.87	993.0	
XSECTION 70	ADDHYD	.27	7	2	.05	.0	3.10	24.00	1.22	---	6.13	259.62	965.1	
XSECTION 71	REACH	.27	7	2	.05	.0	3.10	24.00	1.22	---	6.26	228.36	848.9	
XSECTION 71	RUNOFF	.15	7	2	.05	.0	3.10	24.00	1.55	---	6.15	173.46	1156.4	
XSECTION 71	ADDHYD	.42	7	2	.05	.0	3.10	24.00	1.34	---	6.21	390.52	932.0	
XSECTION 71	REACH	7.53	7	2	.05	.0	3.10	24.00	.98	---	6.31	2680.74	356.0	
XSECTION 71	ADDHYD	7.95	7	2	.05	.0	3.10	24.00	1.00	---	6.30	3041.42	382.6	
XSECTION 72	REACH	7.95	7	2	.05	.0	3.10	24.00	1.00	---	6.38	2978.00	374.6	
XSECTION 72	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.55	---	6.07	157.52	1381.7	
XSECTION 72	ADDHYD	8.06	7	2	.05	.0	3.10	24.00	1.01	---	6.38	3024.90	375.1	
XSECTION 73	RUNOFF	.15	7	2	.05	.0	3.10	24.00	2.04	---	6.03	286.84	1912.3	
XSECTION 74	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.55	---	6.06	164.51	1443.0	
XSECTION 74	ADDHYD	.26	7	2	.05	.0	3.10	24.00	1.83	---	6.04	450.06	1704.8	
XSECTION 74	REACH	8.06	7	2	.05	.0	3.10	24.00	1.01	---	6.46	2992.96	371.2	
XSECTION 74	ADDHYD	8.33	7	2	.05	.0	3.10	24.00	1.03	---	6.45	3064.30	368.0	

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SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCRH (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 75	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.21	---	6.11	113.43	1003.8	
XSECTION 76	RUNOFF	.09	7	2	.05	.0	3.10	24.00	1.21	---	6.14	81.09	942.9	
XSECTION 76	ADDHYD	.20	7	2	.05	.0	3.10	24.00	1.21	---	6.12	193.74	973.5	
XSECTION 76	REACH	8.33	7	2	.05	.0	3.10	24.00	1.03	---	6.52	3033.94	364.3	
XSECTION 76	ADDHYD	9.53	7	2	.05	.0	3.10	24.00	1.04	---	6.52	3087.61	362.1	
XSECTION 77	REACH	8.53	7	2	.05	.0	3.10	24.00	1.03	---	6.59	3066.97	359.7	
XSECTION 77	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.41	---	6.10	168.30	1193.6	
XSECTION 77	ADDHYD	8.67	7	2	.05	.0	3.10	24.00	1.04	---	6.59	3098.56	357.5	
XSECTION 78	REACH	8.67	7	2	.05	.0	3.10	24.00	1.04	---	6.70	3013.78	347.7	
XSECTION 78	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.21	---	6.21	110.38	811.6	
XSECTION 78	ADDHYD	9.80	7	2	.05	.0	3.10	24.00	1.04	---	6.69	3049.04	346.3	
ALTERNATE 1 STORM 2														
XSECTION 1	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.65	---	6.09	152.04	1490.6	
XSECTION 2	REACH	.10	7	2	.05	.0	4.50	24.00	1.65	---	6.09	152.04	1490.6	
XSECTION 2	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.94	---	6.08	165.95	1765.5	
XSECTION 2	ADDHYD	.20	7	2	.05	.0	4.50	24.00	1.79	---	6.08	317.92	1622.1	
XSECTION 3	REACH	.20	7	2	.05	.0	4.50	24.00	1.78	---	6.22	293.10	1495.4	
XSECTION 3	RUNOFF	.17	7	2	.05	.0	4.50	24.00	1.79	---	6.15	232.78	1377.4	
XSECTION 3	ADDHYD	.37	7	2	.05	.0	4.50	24.00	1.79	---	6.19	515.76	1413.1	
XSECTION 4	REACH	.37	7	2	.05	.0	4.50	24.00	1.79	---	6.19	515.76	1413.1	
XSECTION 4	RUNOFF	.18	7	2	.05	.0	4.50	24.00	1.79	---	6.12	264.11	1443.2	
XSECTION 4	ADDHYD	.55	7	2	.05	.0	4.50	24.00	1.79	---	6.17	765.94	1397.7	
XSECTION 5	REACH	.55	7	2	.05	.0	4.50	24.00	1.78	---	6.23	756.87	1381.2	
XSECTION 5	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.51	---	6.12	119.33	1230.2	
XSECTION 5	ADDHYD	.64	7	2	.05	.0	4.50	24.00	1.74	---	6.22	856.44	1327.9	
XSECTION 6	REACH	.64	7	2	.05	.0	4.50	24.00	1.74	---	6.27	854.33	1324.5	
XSECTION 6	RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.37	---	6.21	107.12	923.4	
XSECTION 6	ADDHYD	.76	7	2	.05	.0	4.50	24.00	1.68	---	6.26	957.31	1258.0	
XSECTION 7	REACH	.76	7	2	.05	.0	4.50	24.00	1.68	---	6.33	946.12	1243.3	
XSECTION 7	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.72	---	6.08	148.00	1557.9	
XSECTION 7	ADDHYD	.86	7	2	.05	.0	4.50	24.00	1.69	---	6.31	1004.32	1173.3	
XSECTION 8	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.42	---	6.17	175.45	1754.5	
XSECTION 9	REACH	.10	7	2	.05	.0	4.50	24.00	2.42	---	6.29	161.43	1614.3	
XSECTION 9	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.17	---	6.21	212.75	1467.2	
XSECTION 9	ADDHYD	.25	7	2	.05	.0	4.50	24.00	2.27	---	6.25	369.03	1506.2	
XSECTION 10	REACH	.86	7	2	.05	.0	4.50	24.00	1.68	---	6.41	960.27	1121.8	

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						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE		1	STORM		2								
XSECTION	10 REACH	.25	7	2	.05	.0	4.50	24.00	2.27	---	6.25	369.03	1506.2
XSECTION	10 ADDHYD	1.10	7	2	.05	.0	4.50	24.00	1.81	---	6.38	1274.67	1157.7
XSECTION	10 RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.64	---	6.14	195.64	1289.1
XSECTION	10 ADDHYD	1.24	7	2	.05	.0	4.50	24.00	1.79	---	6.35	1377.26	1106.2
XSECTION	11 RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.07	223.39	1667.1
XSECTION	12 REACH	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.13	222.66	1661.6
XSECTION	12 RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.87	---	6.08	137.32	1695.4
XSECTION	12 ADDHYD	.22	7	2	.05	.0	4.50	24.00	1.82	---	6.11	356.06	1656.1
XSECTION	13 REACH	.22	7	2	.05	.0	4.50	24.00	1.82	---	6.16	352.74	1640.7
XSECTION	13 RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.86	---	6.11	202.97	1549.4
XSECTION	13 ADDHYD	.35	7	2	.05	.0	4.50	24.00	1.84	---	6.15	548.85	1586.3
XSECTION	14 RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.64	---	6.13	160.63	1316.6
XSECTION	15 REACH	.35	7	2	.05	.0	4.50	24.00	1.84	---	6.15	548.85	1586.3
XSECTION	15 REACH	.12	7	2	.05	.0	4.50	24.00	1.64	---	6.25	140.69	1153.2
XSECTION	15 ADDHYD	.47	7	2	.05	.0	4.50	24.00	1.78	---	6.16	675.24	1442.8
XSECTION	15 RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.86	---	6.12	155.34	1508.1
XSECTION	15 ADDHYD	.57	7	2	.05	.0	4.50	24.00	1.80	---	6.15	827.30	1448.9
XSECTION	16 RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.18	---	6.12	188.30	1743.5
XSECTION	17 REACH	.57	7	2	.05	.0	4.50	24.00	1.79	39.00	6.23	800.41	1401.8
XSECTION	17 REACH	.11	7	2	.05	.0	4.50	24.00	2.17	33.69	6.23	175.46	1624.7
XSECTION	17 ADDHYD	.68	7	2	.05	.0	4.50	24.00	1.85	40.69	6.23	975.83	1437.2
XSECTION	17 RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.02	---	6.11	178.90	1641.3
XSECTION	17 ADDHYD	.79	7	2	.05	.0	4.50	24.00	1.88	41.13	6.21	1128.08	1431.6
XSECTION	17 ADDHYD	2.03	7	2	.05	.0	4.50	24.00	1.83	42.39	6.27	2401.03	1181.0
XSECTION	17 DIVERT	1.20	7	2	.05	.0	4.50	24.00	2.46	41.60	6.27	1406.93	1173.0
XSECTION	18 DIVERT	.83	7	2	.05	.0	4.50	24.00	.92	41.60	6.27	994.10	1192.6
XSECTION	18 REACH	.83	7	2	.05	.0	4.50	24.00	.92	41.53	6.39	901.84	1081.9
XSECTION	18 RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.71	---	6.38	132.00	880.0
XSECTION	18 ADDHYD	.98	7	2	.05	.0	4.50	24.00	1.04	41.63	6.39	1033.80	1051.1
XSECTION	19 RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.94	---	6.07	141.09	1808.9
XSECTION	20 RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.72	---	6.12	206.92	1379.4
XSECTION	21 REACH	.15	7	2	.05	.0	4.50	24.00	1.71	---	6.20	200.50	1336.7
XSECTION	21 RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.79	---	6.10	137.90	1549.4
XSECTION	21 ADDHYD	.24	7	2	.05	.0	4.50	24.00	1.74	---	6.15	324.10	1356.1
XSECTION	22 RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.10	201.77	1505.7
XSECTION	23 REACH	.13	7	2	.05	.0	4.50	24.00	1.78	---	6.22	175.07	1306.5

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						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE		1	STORM		2									
XSECTION	23	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.94	---	6.16	215.18	1453.9
XSECTION	23	ADDHYD	.28	7	2	.05	.0	4.50	24.00	1.86	---	6.19	384.34	1362.9
XSECTION	23	REACH	.03	7	2	.05	.0	4.50	24.00	1.94	---	6.13	139.11	1793.4
XSECTION	23	ADDHYD	.36	7	2	.05	.0	4.50	24.00	1.88	---	6.17	517.79	1438.3
XSECTION	23	ADDHYD	.60	7	2	.05	.0	4.50	24.00	1.83	---	6.16	841.37	1404.6
XSECTION	24	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.10	146.06	1505.7
XSECTION	25	REACH	.10	7	2	.05	.0	4.50	24.00	1.78	---	6.22	128.37	1323.4
XSECTION	25	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.94	---	6.11	179.44	1616.6
XSECTION	25	ADDHYD	.21	7	2	.05	.0	4.50	24.00	1.87	---	6.15	294.19	1414.4
XSECTION	26	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.10	153.58	1505.7
XSECTION	26	REACH	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.18	148.68	1457.6
XSECTION	27	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.79	---	6.10	167.34	1549.4
XSECTION	27	ADDHYD	.21	7	2	.05	.0	4.50	24.00	1.79	---	6.13	306.77	1460.8
XSECTION	27	REACH	.60	7	2	.05	.0	4.50	24.00	1.82	---	6.22	832.60	1390.0
XSECTION	27	ADDHYD	.81	7	2	.05	.0	4.50	24.00	1.81	---	6.20	1112.52	1375.2
XSECTION	28	REACH	.21	7	2	.05	.0	4.50	24.00	1.86	---	6.25	273.85	1316.6
XSECTION	28	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.18	---	6.06	208.93	2029.5
XSECTION	28	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.97	---	6.14	421.29	1354.6
XSECTION	28	REACH	.91	7	2	.05	.0	4.50	24.00	1.81	---	6.26	1097.94	1357.2
XSECTION	28	ADDHYD	1.12	7	2	.05	.0	4.50	24.00	1.85	---	6.24	1476.22	1318.1
XSECTION	29	RUNOFF	.16	7	2	.05	.0	4.50	24.00	1.87	---	6.10	245.29	1572.4
XSECTION	30	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.09	322.63	2069.1
XSECTION	31	REACH	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.14	322.44	2067.0
XSECTION	31	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.09	---	6.11	271.81	1709.5
XSECTION	31	ADDHYD	.31	7	2	.05	.0	4.50	24.00	2.26	---	6.13	592.69	1881.5
XSECTION	32	REACH	.31	7	2	.05	.0	4.50	24.00	2.26	---	6.13	592.69	1881.5
XSECTION	32	RUNOFF	.17	7	2	.05	.0	4.50	24.00	2.10	---	6.09	308.64	1826.3
XSECTION	32	ADDHYD	.48	7	2	.05	.0	4.50	24.00	2.20	---	6.11	896.12	1851.5
XSECTION	33	REACH	1.12	7	2	.05	.0	4.50	24.00	1.85	---	6.33	1427.24	1274.3
XSECTION	33	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.60	---	6.07	353.31	2264.8
XSECTION	33	ADDHYD	1.28	7	2	.05	.0	4.50	24.00	1.94	---	6.29	1589.33	1245.6
XSECTION	33	REACH	.16	7	2	.05	.0	4.50	24.00	1.86	---	6.17	241.71	1549.4
XSECTION	33	REACH	.48	7	2	.05	.0	4.50	24.00	2.20	---	6.16	893.03	1845.1
XSECTION	33	ADDHYD	1.43	7	2	.05	.0	4.50	24.00	1.93	---	6.27	1797.86	1249.5
XSECTION	33	ADDHYD	1.92	7	2	.05	.0	4.50	24.00	2.00	---	6.22	2413.01	1363.8
STRUCTURE	33	RESVOR	1.92	7	2	.05	.0	4.50	24.00	1.99	6118.07	6.35	2337.55	1220.0

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 34	REACH	1.92	7	2	.05	.0	4.50	24.00	1.98	---	6.42	2244.26	1171.3	
XSECTION 34	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.17	180.15	1305.4	
XSECTION 34	ADDHYD	2.05	7	2	.05	.0	4.50	24.00	1.97	---	6.42	2345.28	1141.8	
XSECTION 34	ADDHYD	3.04	7	2	.05	.0	4.50	24.00	1.67	---	6.41	3373.96	1110.9	
XSECTION 35	REACH	3.04	7	2	.05	.0	4.50	24.00	1.67	---	6.41	3373.96	1110.8	
XSECTION 35	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.14	202.54	1457.1	
XSECTION 35	ADDHYD	3.18	7	2	.05	.0	4.50	24.00	1.68	--	6.41	3468.99	1092.1	
XSECTION 36	REACH	3.18	7	2	.05	.0	4.50	24.00	1.68	---	6.41	3468.99	1092.1	
XSECTION 36	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.26	---	6.11	216.15	1771.7	
XSECTION 36	ADDHYD	3.30	7	2	.05	.0	4.50	24.00	1.70	---	6.40	3575.54	1084.0	
XSECTION 37	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.02	---	6.10	218.76	1709.0	
XSECTION 38	RUNOFF	.19	7	2	.05	.0	4.50	24.00	1.86	---	6.29	206.02	1107.7	
XSECTION 39	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.93	---	6.21	199.94	1315.4	
XSECTION 40	REACH	.15	7	2	.05	.0	4.50	24.00	1.93	---	6.32	187.31	1232.3	
XSECTION 40	RUNOFF	.17	7	2	.05	.0	4.50	24.00	1.72	---	6.11	243.96	1418.4	
XSECTION 40	ADDHYD	.32	7	2	.05	.0	4.50	24.00	1.82	---	6.17	383.64	1184.1	
XSECTION 40	REACH	3.30	7	2	.05	.0	4.50	24.00	1.70	---	6.51	3376.71	1023.7	
XSECTION 40	REACH	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.18	209.26	1634.8	
XSECTION 40	REACH	.19	7	2	.05	.0	4.50	24.00	1.85	---	6.35	204.40	1093.9	
XSECTION 40	ADDHYD	.45	7	2	.05	.0	4.50	24.00	1.87	---	6.17	592.68	1311.2	
XSECTION 40	ADDHYD	.64	7	2	.05	.0	4.50	24.00	1.87	---	6.21	756.46	1185.7	
XSECTION 40	ADDHYD	3.94	7	2	.05	.0	4.50	24.00	1.72	---	6.49	3848.68	977.7	
XSECTION 41	REACH	3.94	7	2	.05	.0	4.50	24.00	1.72	---	6.57	3790.22	962.8	
XSECTION 41	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.94	---	6.18	215.21	1406.6	
XSECTION 41	ADDHYD	4.09	7	2	.05	.0	4.50	24.00	1.73	---	6.56	3868.43	945.9	
XSECTION 42	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.26	162.85	1154.9	
XSECTION 43	REACH	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.26	162.85	1154.9	
XSECTION 43	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.93	---	6.32	142.52	1088.0	
XSECTION 43	ADDHYD	.27	7	2	.05	.0	4.50	24.00	1.89	---	6.29	302.91	1113.6	
XSECTION 44	REACH	.27	7	2	.05	.0	4.50	24.00	1.89	---	6.35	301.47	1108.3	
XSECTION 44	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.79	---	6.11	136.46	1483.3	
XSECTION 44	ADDHYD	.36	7	2	.05	.0	4.50	24.00	1.86	---	6.27	381.00	1046.7	
XSECTION 45	REACH	.36	7	2	.05	.0	4.50	24.00	1.86	---	6.33	379.60	1042.8	
XSECTION 45	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.02	---	6.11	164.13	1641.3	
XSECTION 45	ADDHYD	.46	7	2	.05	.0	4.50	24.00	1.90	---	6.24	493.97	1064.6	
XSECTION 45	ADDHYD	4.55	7	2	.05	.0	4.50	24.00	1.75	---	6.55	4207.32	924.0	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 46	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.94	---	6.14	209.98	1521.6	
XSECTION 47	REACH	.14	7	2	.05	.0	4.50	24.00	1.93	---	6.26	185.27	1342.6	
XSECTION 47	RUNOFF	.16	7	2	.05	.0	4.50	24.00	1.79	---	6.11	229.91	1483.3	
XSECTION 47	ADDHYD	.29	7	2	.05	.0	4.50	24.00	1.86	---	6.16	386.35	1318.6	
XSECTION 48	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.19	189.59	1414.9	
XSECTION 49	REACH	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.34	163.36	1219.1	
XSECTION 49	RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.79	---	6.14	117.32	1413.5	
XSECTION 49	ADDHYD	.22	7	2	.05	.0	4.50	24.00	1.92	---	6.24	250.80	1155.7	
XSECTION 50	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.01	---	6.30	140.47	1170.6	
XSECTION 51	REACH	.22	7	2	.05	.0	4.50	24.00	1.92	---	6.35	240.17	1106.8	
XSECTION 51	REACH	.12	7	2	.05	.0	4.50	24.00	2.00	---	6.44	129.54	1079.5	
XSECTION 51	ADDHYD	.34	7	2	.05	.0	4.50	24.00	1.95	---	6.38	365.04	1083.2	
XSECTION 51	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.60	---	6.08	208.46	2217.7	
XSECTION 51	ADDHYD	.43	7	2	.05	.0	4.50	24.00	2.09	---	6.25	467.68	1085.1	
XSECTION 52	REACH	.13	7	2	.05	.0	4.50	24.00	2.09	---	6.38	450.99	1046.4	
XSECTION 52	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.94	---	6.18	195.51	1406.6	
XSECTION 52	ADDHYD	.57	7	2	.05	.0	4.50	24.00	2.05	---	6.29	606.55	1064.1	
XSECTION 52	ADDHYD	.86	7	2	.05	.0	4.50	24.00	1.98	---	6.22	963.76	1116.8	
XSECTION 52	REACH	4.55	7	2	.05	.0	4.50	24.00	1.74	---	6.61	4188.83	919.9	
XSECTION 52	ADDHYD	5.42	7	2	.05	.0	4.50	24.00	1.78	---	6.59	4774.01	881.4	
XSECTION 53	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.16	188.83	1329.8	
XSECTION 54	REACH	5.42	7	2	.05	.0	4.50	24.00	1.78	---	6.67	4720.92	871.6	
XSECTION 54	REACH	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.16	188.83	1329.8	
XSECTION 54	RUNOFF	.17	7	2	.05	.0	4.50	24.00	2.09	---	6.15	264.31	1582.7	
XSECTION 54	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.95	---	6.16	453.02	1466.1	
XSECTION 54	ADDHYD	5.73	7	2	.05	.0	4.50	24.00	1.79	---	6.66	4831.17	843.8	
XSECTION 55	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.97	---	6.19	252.01	2048.9	
XSECTION 55	ADDHYD	5.85	7	2	.05	.0	4.50	24.00	1.81	---	6.65	4916.52	840.6	
XSECTION 56	REACH	5.85	7	2	.05	.0	4.50	24.00	1.81	---	6.71	4911.22	839.7	
XSECTION 56	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.09	324.65	2041.8	
XSECTION 56	ADDHYD	6.01	7	2	.05	.0	4.50	24.00	1.83	---	6.71	4955.37	824.9	
XSECTION 57	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.12	275.48	1743.5	
XSECTION 58	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.10	---	6.09	193.59	1826.3	
XSECTION 59	REACH	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.12	275.48	1743.5	
XSECTION 59	REACH	.11	7	2	.05	.0	4.50	24.00	2.09	--	6.16	187.39	1767.8	
XSECTION 59	ADDHYD	.26	7	2	.05	.0	4.50	24.00	2.14	---	6.14	460.94	1746.0	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCRM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	1	STORM	2										
XSECTION 59	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.87	---	6.08	193.27	1695.4
XSECTION 59	ADDHYD	.38	7	2	.05	.0	4.50	24.00	2.06	---	6.12	644.88	1706.0
XSECTION 60	REACH	.38	7	2	.05	.0	4.50	24.00	2.06	---	6.12	644.88	1706.0
XSECTION 60	RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.87	---	6.08	194.27	1660.4
XSECTION 60	ADDHYD	.50	7	2	.05	.0	4.50	24.00	2.01	---	6.11	836.31	1689.5
XSECTION 61	REACH	.50	7	2	.05	.0	4.50	24.00	2.01	---	6.11	836.31	1689.5
XSECTION 61	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.52	---	6.09	278.54	2142.6
XSECTION 61	ADDHYD	.63	7	2	.05	.0	4.50	24.00	2.12	---	6.10	1113.33	1781.3
XSECTION 62	RUNOFF	.18	7	2	.05	.0	4.50	24.00	2.79	---	6.03	479.28	2692.6
XSECTION 63	REACH	.18	7	2	.05	.0	4.50	24.00	2.79	---	6.03	479.28	2692.6
XSECTION 63	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.98	---	6.08	326.69	2493.8
XSECTION 63	ADDHYD	.31	7	2	.05	.0	4.50	24.00	2.87	---	6.04	799.70	2588.0
XSECTION 63	ADDHYD	.93	7	2	.05	.0	4.50	24.00	2.37	---	6.08	1887.14	2020.5
XSECTION 64	REACH	.93	7	2	.05	.0	4.50	24.00	2.36	---	6.13	1878.67	2011.4
XSECTION 64	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.60	---	6.13	217.95	2056.2
XSECTION 64	ADDHYD	1.04	7	2	.05	.0	4.50	24.00	2.39	---	6.13	2096.61	2016.0
XSECTION 65	REACH	1.04	7	2	.05	.0	4.50	24.00	2.39	---	6.19	2076.26	1996.4
XSECTION 65	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.94	---	6.08	162.63	1730.1
XSECTION 65	ADDHYD	1.13	7	2	.05	.0	4.50	24.00	2.35	---	6.18	2208.32	1947.1
XSECTION 66	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.98	---	6.08	289.29	2493.8
XSECTION 66	ADDHYD	1.25	7	2	.05	.0	4.50	24.00	2.41	---	6.17	2458.57	1966.9
XSECTION 67	REACH	1.25	7	2	.05	.0	4.50	24.00	2.40	---	6.24	2416.33	1933.1
XSECTION 67	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.02	---	6.10	276.33	1681.9
XSECTION 67	ADDHYD	1.41	7	2	.05	.0	4.50	24.00	2.36	---	6.23	2630.16	1860.1
XSECTION 68	RUNOFF	.11	7	2	.05	.0	4.50	24.00	3.18	---	6.03	320.32	2938.7
XSECTION 68	ADDHYD	1.52	7	2	.05	.0	4.50	24.00	2.42	---	6.21	2783.62	1827.7
XSECTION 68	ADDHYD	7.53	7	2	.05	.0	4.50	24.00	1.95	---	6.31	5985.60	794.8
XSECTION 69	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.43	---	6.10	211.28	1993.2
XSECTION 70	REACH	.11	7	2	.05	.0	4.50	24.00	2.42	---	6.18	204.41	1928.4
XSECTION 70	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.09	309.37	1898.0
XSECTION 70	ADDHYD	.27	7	2	.05	.0	4.50	24.00	2.27	---	6.11	498.36	1852.6
XSECTION 71	REACH	.27	7	2	.05	.0	4.50	24.00	2.27	---	6.23	454.59	1689.9
XSECTION 71	RUNOFF	.15	7	2	.05	.0	4.50	24.00	2.69	---	6.14	305.17	2034.5
XSECTION 71	ADDHYD	.42	7	2	.05	.0	4.50	24.00	2.42	---	6.19	746.14	1780.8
XSECTION 71	REACH	7.53	7	2	.05	.0	4.50	24.00	1.95	---	6.31	5985.60	794.8
XSECTION 71	ADDHYD	7.95	7	2	.05	.0	4.50	24.00	1.97	---	6.29	6652.17	936.8

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	1	STORM	2										
XSECTION 72	REACH	7.95	7	2	.05	.0	4.50	24.00	1.97	---	6.37	6586.28	828.5
XSECTION 72	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.70	---	6.06	272.71	2392.2
XSECTION 72	ADDHYD	8.06	7	2	.05	.0	4.50	24.00	1.98	---	6.36	6671.04	827.3
XSECTION 73	RUNOFF	.15	7	2	.05	.0	4.50	24.00	3.28	---	6.03	451.45	3009.7
XSECTION 74	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.70	---	6.05	283.41	2486.0
XSECTION 74	ADDHYD	.26	7	2	.05	.0	4.50	24.00	3.03	---	6.03	733.54	2778.5
XSECTION 74	REACH	8.06	7	2	.05	.0	4.50	24.00	1.98	---	6.42	6638.33	823.3
XSECTION 74	ADDHYD	8.33	7	2	.05	.0	4.50	24.00	2.01	---	6.42	6763.30	812.2
XSECTION 75	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.26	---	6.10	214.26	1896.1
XSECTION 76	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.26	---	6.13	154.01	1790.8
XSECTION 76	ADDHYD	.20	7	2	.05	.0	4.50	24.00	2.26	---	6.11	367.09	1844.7
XSECTION 76	REACH	8.33	7	2	.05	.0	4.50	24.00	2.01	---	6.48	6725.98	807.7
XSECTION 76	ADDHYD	8.53	7	2	.05	.0	4.50	24.00	2.01	---	6.48	6835.65	801.7
XSECTION 77	REACH	8.53	7	2	.05	.0	4.50	24.00	2.01	---	6.54	6817.47	799.6
XSECTION 77	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.52	---	6.09	302.10	2142.6
XSECTION 77	ADDHYD	8.67	7	2	.05	.0	4.50	24.00	2.02	---	6.53	6878.99	793.7
XSECTION 78	REACH	8.67	7	2	.05	.0	4.50	24.00	2.01	---	6.53	6761.56	790.1
XSECTION 78	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.25	---	6.20	212.11	1559.7
XSECTION 78	ADDHYD	8.80	7	2	.05	.0	4.50	24.00	2.02	---	6.62	6841.55	777.1

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS					PEAK			
XSED REACH		INFLOW		OUTFLOW		OUTFLOW+		BASE-	VOLUME	MAIN	ITER-	D AND A		PEAK	S/D	ATT-	TRAVEL TIME	
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME					EQUATION	LENGTH				STOR-	KINE-
(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(CFS)	(IN)	(HR)	#	COEFF	POWER	FACTOR	O/I	(K)	AGE	MATIC
												(X)	(M)	(X*)	(Q*)	(SEC)	(C)	(HR)
ALTERNATE	1	STORM	1															
2	500	70	6.1	70	6.1	152	6.1	0	.78	.05	0	.920	1.51	.010	1.000	83	1.007	.00
3	2300	152	6.1	132	6.2	240	6.2	0	.88	.05	1	.710	1.49	.099	.869	372	.39	.10
4	550	240	6.2	240	6.2	360	6.2	0	.87	.05	0	1.70	1.46	.004	1.000	47	1.007	.00
5	1800	360	6.2	351	6.3	393	6.3	0	.87	.05	1	1.05	1.47	.027	.977	190	.67	.10
6	1400	393	6.3	390	6.3	430	6.3	0	.84	.05	1	1.450	1.63	.013	.993	139	.787	.05
7	1500	430	6.3	420	6.3	445	6.3	0	.81	.05	1	1.59	1.33	.030	.977	177	.677	.05
9	2400	95	6.2	84	6.3	185	6.3	0	1.34	.05	1	1.43	1.33	.103	.890	446	.34	.10
10	3250	445	6.3	414	6.5	---	---	0	.81	.05	1	1.82	1.33	.064	.930	343	.42	.10
10	1450	185	6.3	185	6.3	---	---	0	1.22	.05	0	1.35	1.44	.006	1.000	74	1.007	.00
12	1150	107	6.1	106	6.2	168	6.1	0	.88	.05	1	2.62	1.33	.028	.990	131	.817	.05
13	3550	168	6.1	167	6.2	258	6.2	0	.90	.05	1	6.75	1.40	.029	.989	150	.757	.10
15	900	258	6.2	258	6.2	---	---	0	.91	.05	0	6.04	1.42	.003	1.000	35	1.007	.00
15	3700	72	6.2	59	6.3	---	---	0	.78	.05	1	2.26	1.33	.140	.819	521	.29	.15
17	2300	380	6.2	363	6.3	---	---	0	.88	.05	1	1.89	1.33	.051	.954	245	.54	.10
17	2700	97	6.2	87	6.3	---	---	0	1.15	.05	1	.950	1.51	.088	.893	394	.37	.10
18	3850	191	6.3	156	6.5	213	6.5	0	.17	.05	1	.800	1.45	.367	.813	606	.26	.20
21	2300	95	6.2	90	6.3	146	6.2	0	.83	.05	1	3.07	1.33	.050	.941	240	.55	.10
23	3100	95	6.1	78	6.3	178	6.2	0	.88	.05	1	1.59	1.33	.155	.818	532	.29	.15
23	3700	70	6.1	69	6.2	---	---	0	.98	.05	1	9.64	1.34	.041	.977	173	.687	.05
25	2350	69	6.1	57	6.3	137	6.2	0	.88	.05	1	1.33	1.33	.142	.833	699	.31	.15
26	1800	72	6.1	69	6.2	---	---	0	.88	.05	1	2.52	1.33	.052	.954	234	.56	.10
27	1750	388	6.2	381	6.3	503	6.3	0	.90	.05	1	.750	1.53	.022	.981	175	.687	.05
28	3400	137	6.2	123	6.3	196	6.2	0	.93	.05	1	2.47	1.33	.083	.999	382	.38	.15
28	2250	503	6.3	495	6.3	---	---	0	.89	.05	1	2.52	1.33	.030	.984	180	.67	.05
31	2000	177	6.1	176	6.2	313	6.2	0	1.34	.05	1	4.55	1.40	.018	.995	110	.907	.05
32	1700	313	6.2	313	6.2	465	6.2	0	1.21	.05	0	3.13	1.46	.011	1.000	86	1.007	.00
33	2900	661	6.3	630	6.4	705	6.3	0	.92	.05	1	1.75	1.33	.050	.953	286	.48	.10
33	1200	118	6.1	115	6.2	---	---	0	.93	.05	1	.830	1.49	.030	.973	183	.66	.10
33	1300	465	6.2	463	6.2	---	---	0	1.17	.05	1	.980	1.46	.019	.996	130	.827	.05
34	2450	836	6.5	795	6.6	823	6.6	0	1.02	.05	1	.670	1.44	.024	.952	288	.48	.10
35	1250	1044	6.6	1044	6.6	1043	6.6	0	.77	.05	0	2.47	1.51	.001	1.000	44	1.007	.00
36	700	1043	6.6	1040	6.7	1068	6.6	0	.78	.05	1	.210	1.52	.006	.997	119	.867	.10

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS					PEAK			
XSEC REACH	INFLOW		OUTFLOW		OUTFLOW+		BASE-	VOLUME	MAIN	ITER-	Q AND A		LENGTH	PEAK	S/Q	ATT-	TRAVEL TIM	
ID LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	ABOVE	TIME	ATION	EQUATION			RATIO	@PEAK	KIN	STOP-	KIME
(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)	*	COEFF	POWER	FACTOR	Q/I	(K)	COEFF	AGE	MAT
											(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)	(HR)
ALTERNATE	1	STORM	1															
40	1800	96	6.3	88	6.3	173	6.2	0	.98	.05	1	1.13	1.33	.078	.915	398	.37	.10
40	2650	1068	6.6	999	6.8	---	---	0	.79	.05	1	.210	1.52	.040	.935	448	.33	.15
40	1050	110	6.1	101	6.2	---	---	0	1.04	.05	1	.220	1.59	.059	.923	299	.46	.10
40	650	97	6.3	95	6.4	---	---	0	.92	.05	1	.220	1.59	.016	.982	194	.63	.10
41	1700	1131	6.8	1109	6.8	1132	6.8	0	.81	.05	1	.200	1.52	.017	.981	291	.47	.10
43	500	76	6.3	76	6.3	143	6.3	0	.92	.05	0	4.27	1.42	.002	1.000	35	1.007	.00
44	2750	143	6.3	141	6.4	176	6.3	0	.95	.05	1	3.97	1.44	.016	.987	161	.727	.10
45	2800	176	6.3	174	6.3	226	6.3	0	.93	.05	1	3.97	1.44	.013	.991	154	.747	.05
47	4050	103	6.2	86	6.3	177	6.2	0	.98	.05	1	2.26	1.33	.139	.836	523	.29	.15
49	3600	93	6.2	76	6.4	114	6.3	0	1.03	.05	1	1.51	1.33	.157	.816	644	.25	.20
51	2100	114	6.3	108	6.4	---	---	0	.97	.05	1	1.51	1.33	.054	.942	357	.40	.15
51	2600	68	6.3	61	6.5	---	---	0	1.03	.05	1	1.43	1.33	.092	.897	524	.29	.20
52	2700	219	6.3	208	6.4	283	6.3	0	1.09	.05	1	1.51	1.33	.049	.954	391	.37	.15
52	1250	1235	6.8	1228	6.8	---	---	0	.83	.05	1	.210	1.52	.008	.994	201	.62	.05
54	1800	1432	6.8	1424	6.9	---	---	0	.86	.05	1	.190	1.52	.014	.995	294	.47	.10
54	650	88	6.2	88	6.2	220	6.2	0	.87	.05	0	3.19	1.33	.008	1.000	67	1.007	.00
56	1900	1512	6.6	1514	6.6	1549	6.6	0	.88	.05	1	.480	1.53	.005	.997	159	.727	.05
59	1350	143	6.2	143	6.2	---	---	0	1.15	.05	0	5.05	1.42	.008	1.000	70	1.007	.00
59	1900	100	6.1	94	6.2	---	---	0	1.09	.05	1	2.42	1.33	.057	.944	235	.55	.10
60	1200	323	6.2	323	6.2	413	6.1	0	1.07	.05	0	3.31	1.42	.008	1.000	66	1.007	.00
61	1800	413	6.1	413	6.1	568	6.1	0	1.03	.05	0	4.35	1.44	.008	1.000	71	1.007	.00
63	1400	284	6.1	284	6.1	476	6.1	0	1.63	.05	0	6.43	1.40	.008	1.000	53	1.007	.00
64	1250	1025	6.1	1017	6.2	1140	6.2	0	1.30	.05	1	1.43	1.33	.025	.993	129	.827	.05
65	1600	1140	6.2	1118	6.2	1183	6.2	0	1.32	.05	1	1.51	1.33	.031	.981	154	.747	.05
67	4300	1329	6.2	1281	6.3	1386	6.3	0	1.34	.05	1	1.29	1.51	.036	.964	212	.60	.05
70	1500	115	6.1	109	6.2	258	6.2	0	1.34	.05	1	.670	1.50	.053	.948	269	.50	.10
71	2950	258	6.2	228	6.3	390	6.2	0	1.22	.05	1	1.42	1.33	.112	.883	429	.35	.10
71	650	2678	6.3	2678	6.3	---	---	0	.98	.05	0	.790	1.33	.004	1.000	82	1.007	.00
72	1300	3041	6.3	2974	6.4	3017	6.4	0	1.00	.05	1	.140	1.50	.013	.978	222	.58	.10
74	1500	3017	6.4	2993	6.5	---	---	0	1.01	.05	1	.220	1.51	.009	.992	181	.66	.05
76	1450	3064	6.5	3025	6.5	---	---	0	1.03	.05	1	.200	1.51	.009	.987	185	.65	.05
77	1050	3083	6.5	3066	6.6	3096	6.6	0	1.04	.05	1	.160	1.50	.007	.994	163	.717	.10

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS					PEAK		
XSEC REACH	INFLOW		OUTFLOW		OUTFLOW+		BASE-	VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIME	
ID LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	#PEAK	KIN	STOR-	KINE-
(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)	#	COEFF	POWER FACTOR	Q/I	(K)	COEFF	AGE	MATIC
											(X)	(M)	(K#)	(SEC)	(C)	(HR)	(HR)
ALTERNATE	1	STORM	1														
78	2450	3096	6.6	3014	6.7	3049	6.7	0	1.04	.05	1	.190 1.51	.019	.973	323	.44	.10 .09
ALTERNATE	1	STORM	2														
2	500	151	6.1	151	6.1	316	6.1	0	1.65	.05	0	.920 1.51	.007	1.000	64	1.007	.00 .00
3	2300	316	6.1	291	6.2	516	6.2	0	1.79	.05	1	.710 1.49	.071	.921	293	.47	.05 .08
4	550	516	6.2	516	6.2	762	6.2	0	1.79	.05	0	1.70 1.46	.003	1.000	37	1.007	.00 .00
5	1800	762	6.2	754	6.3	953	6.2	0	1.79	.05	1	1.05 1.47	.020	.989	142	.787	.10 .04
6	1400	853	6.2	850	6.3	955	6.3	0	1.74	.05	1	.450 1.63	.009	.996	103	.937	.05 .03
7	1500	955	6.3	942	6.3	1002	6.3	0	1.68	.05	1	1.59 1.33	.025	.986	145	.777	.10 .04
9	2400	175	6.2	161	6.3	369	6.3	0	2.42	.05	1	1.43 1.33	.086	.925	383	.38	.15 .11
10	3250	1002	6.3	959	6.4	---	---	0	1.69	.05	1	1.82 1.33	.054	.957	280	.49	.10 .08
10	1450	369	6.3	369	6.3	---	---	0	2.27	.05	0	1.35 1.44	.005	1.000	60	1.007	.00 .00
12	1150	222	6.1	220	6.2	356	6.1	0	1.79	.05	1	2.62 1.33	.023	.993	110	.907	.10 .03
13	3550	356	6.1	351	6.2	549	6.2	0	1.82	.05	1	6.75 1.40	.022	.988	121	.857	.05 .03
15	900	549	6.2	549	6.2	---	---	0	1.81	.05	0	6.04 1.42	.002	1.000	28	1.007	.00 .00
15	3700	159	6.2	141	6.3	---	---	0	1.64	.05	1	2.26 1.33	.113	.884	428	.35	.10 .12
17	2300	827	6.2	796	6.3	---	---	0	1.80	.05	1	1.89 1.33	.043	.963	202	.62	.10 .06
17	2700	187	6.1	174	6.3	---	---	0	2.18	.05	1	.950 1.51	.065	.933	316	.44	.15 .09
18	3850	990	6.3	901	6.4	1033	6.4	0	.92	.05	1	.800 1.45	.169	.910	364	.40	.15 .10
21	2300	205	6.1	201	6.2	324	6.2	0	1.72	.05	1	3.07 1.33	.041	.977	199	.62	.10 .06
23	3100	202	6.1	174	6.2	384	6.2	0	1.79	.05	1	1.59 1.33	.127	.861	441	.34	.10 .12
23	3700	140	6.1	138	6.2	---	---	0	1.94	.05	1	9.64 1.34	.033	.983	145	.777	.10 .04
25	2350	146	6.1	128	6.2	294	6.2	0	1.79	.05	1	1.33 1.33	.117	.874	414	.36	.10 .12
26	1800	154	6.1	148	6.2	---	---	0	1.79	.05	1	2.52 1.33	.043	.962	194	.63	.10 .05
27	1750	840	6.2	827	6.2	1112	6.2	0	1.83	.05	1	.750 1.53	.016	.985	134	.807	.05 .04
29	3400	294	6.2	274	6.3	421	6.2	0	1.87	.05	1	2.47 1.33	.071	.931	316	.44	.10 .09
29	2250	1112	6.2	1096	6.3	---	---	0	1.81	.05	1	2.52 1.33	.026	.985	148	.767	.05 .04
31	2000	322	6.1	322	6.2	588	6.2	0	2.43	.05	1	4.55 1.40	.014	1.000	93	.987	.05 .03
32	1700	588	6.2	588	6.2	895	6.1	0	2.26	.05	0	3.19 1.46	.008	1.000	71	1.007	.00 .00
33	2900	1475	6.3	1421	6.3	1589	6.3	0	1.85	.05	1	1.75 1.33	.004	.963	234	.56	.10 .07
33	1200	245	6.1	241	6.2	---	---	0	1.87	.05	1	.880 1.49	.022	.982	144	.777	.05 .04
33	1300	895	6.1	890	6.2	---	---	0	2.20	.05	1	.980 1.46	.015	.995	106	.927	.05 .03
34	2450	2337	6.3	2228	6.4	2336	6.4	0	1.99	.05	1	.670 1.44	.026	.954	210	.60	.05 .06

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS						PEAK			
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	Q AND A EQUATION		LENGTH	PEAK RATIO Q/I	S/Q @PEAK (K)	ATT- KIN COEFF (C)	TRAVEL STOR- AGE (HR)	TIME KINE- MATIC (HR)
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	(CFS)	(IN)	(HR)		COEFF (X)	POWER (M)	FACTOR (K*)		(SEC)			
ALTERNATE		1	STORM	2															
35	1250	3369	6.4	3369	6.4	3467	6.4	0	1.67	.05	0	2.47	1.51	.001	1.000	29	1.007	.00	.00
36	700	3467	6.4	3467	6.4	3576	6.4	0	1.68	.05	0	.210	1.52	.006	1.000	79	1.007	.00	.00
40	1800	200	6.2	187	6.3	382	6.2	0	1.93	.05	1	1.13	1.33	.066	.935	332	.43	.10	.09
40	2650	3576	6.4	3375	6.5	---	---	0	1.70	.05	1	.210	1.52	.042	.944	296	.47	.10	.08
40	1050	219	6.1	208	6.2	---	---	0	2.02	.05	1	.220	1.59	.041	.952	232	.56	.10	.06
40	650	206	6.3	204	6.3	---	---	0	1.86	.05	1	.220	1.59	.011	.993	147	.767	.05	.04
41	1700	3844	6.5	3784	6.6	3865	6.6	0	1.72	.05	1	.200	1.52	.018	.984	191	.64	.05	.05
43	500	163	6.3	163	6.3	303	6.3	0	1.86	.05	0	1.27	1.42	.002	1.000	28	1.007	.00	.00
44	2750	303	6.3	301	6.3	380	6.3	0	1.89	.05	1	3.97	1.44	.012	.996	128	.837	.05	.04
45	2800	380	6.3	378	6.3	494	6.3	0	1.86	.05	1	3.97	1.44	.010	.995	122	.857	.10	.03
47	4050	209	6.2	185	6.3	386	6.2	0	1.94	.05	1	2.26	1.33	.115	.883	438	.34	.10	.12
49	3600	189	6.2	163	6.3	251	6.3	0	2.01	.05	1	1.51	1.33	.131	.862	540	.29	.15	.15
51	2100	251	6.3	240	6.3	---	---	0	1.92	.05	1	1.51	1.33	.047	.959	294	.47	.10	.08
51	2600	140	6.3	130	6.5	---	---	0	2.01	.05	1	1.43	1.33	.078	.922	438	.34	.15	.12
52	2700	468	6.3	450	6.4	606	6.3	0	2.09	.05	1	1.51	1.33	.044	.963	324	.43	.15	.09
52	1250	4207	6.6	4186	6.6	---	---	0	1.75	.05	1	.210	1.52	.009	.995	132	.817	.05	.04
54	1800	4771	6.6	4715	6.7	---	---	0	1.78	.05	1	.190	1.52	.015	.988	195	.63	.05	.05
54	650	189	6.2	189	6.2	453	6.2	0	1.79	.05	0	3.19	1.33	.007	1.000	56	1.007	.00	.00
56	1900	4916	6.7	4910	6.7	4955	6.7	0	1.81	.05	1	.480	1.53	.005	.999	106	.927	.05	.03
59	1350	273	6.1	273	6.1	---	---	0	2.18	.05	0	5.05	1.42	.006	1.000	58	1.007	.00	.00
59	1900	193	6.1	187	6.2	---	---	0	2.10	.05	1	2.42	1.33	.046	.969	199	.62	.05	.06
60	1200	642	6.1	642	6.1	836	6.1	0	2.06	.05	0	3.31	1.42	.006	1.000	54	1.007	.00	.00
61	1800	836	6.1	836	6.1	1113	6.1	0	2.01	.05	0	4.35	1.44	.006	1.000	58	1.007	.00	.00
63	1400	475	6.1	475	6.1	799	6.1	0	2.79	.05	0	6.43	1.40	.006	1.000	45	1.007	.00	.00
64	1250	1870	6.1	1867	6.2	2084	6.2	0	2.37	.05	1	1.43	1.33	.020	.999	111	.907	.05	.03
65	1600	2084	6.2	2073	6.2	2198	6.2	0	2.39	.05	1	1.51	1.33	.026	.995	132	.817	.05	.04
67	4300	2445	6.2	2414	6.3	2616	6.3	0	2.41	.05	1	1.29	1.51	.027	.987	173	.697	.10	.05
70	1500	211	6.1	204	6.2	497	6.1	0	2.43	.05	1	.670	1.50	.040	.964	219	.58	.10	.06
71	2950	497	6.1	452	6.3	746	6.2	0	2.27	.05	1	1.42	1.33	.095	.909	365	.40	.15	.10
71	650	5983	6.3	5983	6.3	---	---	0	1.95	.05	0	.790	1.33	.004	1.000	67	1.007	.00	.00
72	1300	6649	6.3	6577	6.3	6668	6.3	0	1.97	.05	1	.140	1.50	.010	.989	171	.697	.05	.05
74	1500	6668	6.3	6618	6.4	---	---	0	1.98	.05	1	.220	1.51	.007	.993	138	.797	.05	.04

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS							PEAK			
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	Q AND A EQUATION		LENGTH FACTOR	PEAK RATIO D/I	S/O @PEAK (K)	ATT- KIN COEFF	TRAVEL TIME		
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME					COEFF	POWER					LENGTH	AGE	MATIC
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)		(%)	(M)	(K*)	(D*)	(SEC)	(C)	(HR)	(HR)	
ALTERNATE	1	STORM	2																	
76	1450	6753	6.4	6717	6.5	---	---	0	2.01	.05	1	.200	1.51	.007	.995	142	.782	.10	.04	
77	1050	6819	6.5	6813	6.6	6871	6.6	0	2.01	.05	1	.160	1.50	.006	.999	125	.847	.05	.03	
78	2450	6871	6.6	6751	6.7	6827	6.6	0	2.02	.05	1	.190	1.51	.015	.983	247	.53	.10	.07	

TR20 XEQ 8/ 2/93 9:37
REV PD/09/93

SHOOKS RUN 90-909 TYPE IIA DISTRIBUTION EXISTING CONDITION
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKEX-1.DAT

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JOB 1 SUMMARY
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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
STRUCTURE 33	1.92		
ALTERNATE 1		934.88	2337.55
XSECTION 1	.10		
ALTERNATE 1		69.79	152.04
XSECTION 2	.20		
ALTERNATE 1		152.57	317.92
XSECTION 3	.37		
ALTERNATE 1		240.17	515.76
XSECTION 4	.55		
ALTERNATE 1		361.84	765.94
XSECTION 5	.64		
ALTERNATE 1		394.51	856.44
XSECTION 6	.76		
ALTERNATE 1		430.76	957.31
XSECTION 7	.86		
ALTERNATE 1		445.45	1004.32
XSECTION 8	.10		
ALTERNATE 1		94.66	175.45
XSECTION 9	.25		
ALTERNATE 1		184.60	369.03
XSECTION 10	1.24		
ALTERNATE 1		612.51	1377.26
XSECTION 11	.13		
ALTERNATE 1		107.76	223.39
XSECTION 12	.22		
ALTERNATE 1		170.45	356.06
XSECTION 13	.35		
ALTERNATE 1		259.90	542.95

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
XSECTION 14	.12		
ALTERNATE 1		72.41	160.63
XSECTION 15	.57		
ALTERNATE 1		383.82	827.30
XSECTION 16	.11		
ALTERNATE 1		97.61	188.30
XSECTION 17	1.20		
ALTERNATE 1		878.49	1406.93
XSECTION 18	.98		
ALTERNATE 1		213.68	1033.80
XSECTION 19	.08		
ALTERNATE 1		70.79	141.09
XSECTION 20	.15		
ALTERNATE 1		95.42	206.92
XSECTION 21	.24		
ALTERNATE 1		146.88	324.10
XSECTION 22	.13		
ALTERNATE 1		95.53	201.77
XSECTION 23	.60		
ALTERNATE 1		389.81	841.37
XSECTION 24	.10		
ALTERNATE 1		69.16	146.06
XSECTION 25	.21		
ALTERNATE 1		136.96	294.19
XSECTION 26	.10		
ALTERNATE 1		68.84	148.68
XSECTION 27	.81		
ALTERNATE 1		506.49	1112.52

TR20 XED 8/ 2/93 8:37
REV PC/09/83

SHOOKS RUN 90-809 TYPE IIA DISTRIBUTION EXISTING CONDITION
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKEX-1.DAT

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JOB 1 SUMMARY
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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
XSECTION 28	1.12		
ALTERNATE 1		663.51	1476.22
XSECTION 29	.16		
ALTERNATE 1		118.58	245.29
XSECTION 30	.16		
ALTERNATE 1		176.87	322.63
XSECTION 31	.31		
ALTERNATE 1		313.62	592.59
XSECTION 32	.48		
ALTERNATE 1		468.62	896.12
XSECTION 33	1.92		
ALTERNATE 1		1216.53	2613.01
XSECTION 34	3.04		
ALTERNATE 1		1017.58	3373.96
XSECTION 35	3.18		
ALTERNATE 1		1046.73	3468.99
XSECTION 36	3.30		
ALTERNATE 1		1071.74	3575.54
XSECTION 37	.13		
ALTERNATE 1		109.97	218.76
XSECTION 38	.19		
ALTERNATE 1		96.65	206.02
XSECTION 39	.15		
ALTERNATE 1		96.40	199.94
XSECTION 40	3.94		
ALTERNATE 1		1133.36	3848.68
XSECTION 41	4.02		
ALTERNATE 1		1133.35	3868.43

TR20 XED 8/ 2/93 8:37
REV PC/09/83

SHOOKS RUN 90-809 TYPE IIA DISTRIBUTION EXISTING CONDITION
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKEY=4.DAT

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JOB 1 SUMMARY
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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
XSECTION 42	.14		
ALTERNATE 1		76.50	162.85
XSECTION 43	.27		
ALTERNATE 1		143.39	302.91
XSECTION 44	.36		
ALTERNATE 1		175.76	381.00
XSECTION 45	4.55		
ALTERNATE 1		1235.71	4207.32
XSECTION 46	.14		
ALTERNATE 1		102.72	209.98
XSECTION 47	.29		
ALTERNATE 1		177.18	386.35
XSECTION 48	.13		
ALTERNATE 1		93.53	189.59
XSECTION 49	.22		
ALTERNATE 1		114.71	250.80
XSECTION 50	.12		
ALTERNATE 1		68.51	140.47
XSECTION 51	.43		
ALTERNATE 1		218.59	467.68
XSECTION 52	5.42		
ALTERNATE 1		1431.67	4774.01
XSECTION 53	.14		
ALTERNATE 1		87.98	188.83
XSECTION 54	5.73		
ALTERNATE 1		1462.28	4831.17
XSECTION 55	5.85		
ALTERNATE 1		1518.02	4916.52

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
XSECTION 56	6.01		
ALTERNATE 1		1548.56	4955.37
XSECTION 57	.16		
ALTERNATE 1		142.80	275.48
XSECTION 58	.11		
ALTERNATE 1		99.51	193.59
XSECTION 59	.38		
ALTERNATE 1		323.80	644.88
XSECTION 60	.50		
ALTERNATE 1		416.74	836.31
XSECTION 61	.63		
ALTERNATE 1		570.66	1113.33
XSECTION 62	.18		
ALTERNATE 1		284.94	479.28
XSECTION 63	.93		
ALTERNATE 1		1028.60	1887.14
XSECTION 64	1.04		
ALTERNATE 1		1140.29	2096.61
XSECTION 65	1.13		
ALTERNATE 1		1183.13	2208.32
XSECTION 66	1.25		
ALTERNATE 1		1330.57	2458.57
XSECTION 67	1.41		
ALTERNATE 1		1387.14	2630.16
XSECTION 68	7.53		
ALTERNATE 1		2680.74	5985.60
XSECTION 69	.11		
ALTERNATE 1		115.35	211.28

TR20 XED 8/ 2/93 8:37
REV PC/09/93

SHOOKS RUN 90-909 TYPE IIA DISTRIBUTION EXISTING CONDITION
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKEX-1.DAT

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JOB 1 SUMMARY
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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
<u>XSECTION 70</u>	<u>.27</u>		
ALTERNATE 1		259.62	498.36
<u>XSECTION 71</u>	<u>7.95</u>		
ALTERNATE 1		3041.42	6652.17
<u>XSECTION 72</u>	<u>8.96</u>		
ALTERNATE 1		3024.90	6671.04
<u>XSECTION 73</u>	<u>.15</u>		
ALTERNATE 1		286.84	451.45
<u>XSECTION 74</u>	<u>8.33</u>		
ALTERNATE 1		3064.30	6763.30
<u>XSECTION 75</u>	<u>.11</u>		
ALTERNATE 1		113.43	214.26
<u>XSECTION 76</u>	<u>8.53</u>		
ALTERNATE 1		3087.61	6835.65
<u>XSECTION 77</u>	<u>8.67</u>		
ALTERNATE 1		3098.56	6878.99
<u>XSECTION 78</u>	<u>8.80</u>		
ALTERNATE 1		3049.04	6841.55

MAIN - UNEXPECTED RECORD FOUND(IGNORED) >>>

(((

**F. TR-20 ANALYSIS
FUTURE CONDITION**

*****80-90 LIST OF INPUT DATA FOR TR-20 HYDROLOGY*****

JOB TR-20		SUMMARY				NO PLOTS	10
TITLE	SHOOKS RUN 90-809	TYPE	I/A	DIST.	FUT. COND.-EXIST.	ROUTING	20
TITLE	PASS 1=10-YEAR 24-HOUR	PASS 2=100-YEAR 24-HOUR			SHK FU		30
5 RAINFL 7		0.25					40
8	0.0000	0.0005	0.0015	0.0030	0.0045		50
8	0.0060	0.0080	0.0100	0.0120	0.0143		60
8	0.0165	0.0188	0.0210	0.0233	0.0255		70
8	0.0278	0.0320	0.0390	0.0460	0.0530		80
8	0.0600	0.0750	0.1000	0.1400	0.2000		90
8	0.7250	0.7500	0.7650	0.7800	0.7900		100
8	0.8000	0.8100	0.8200	0.8250	0.8300		110
8	0.8350	0.8400	0.8450	0.8500	0.8550		120
8	0.8600	0.8638	0.8675	0.8713	0.8750		130
8	0.8788	0.8825	0.8863	0.8900	0.8938		140
8	0.8975	0.9013	0.9050	0.9083	0.9115		150
8	0.9148	0.9180	0.9210	0.9240	0.9270		160
8	0.9300	0.9325	0.9350	0.9375	0.9400		170
8	0.9425	0.9450	0.9475	0.9500	0.9525		180
8	0.9550	0.9575	0.9600	0.9625	0.9650		190
8	0.9675	0.9700	0.9725	0.9750	0.9775		200
8	0.9800	0.9813	0.9825	0.9838	0.9850		210
8	0.9863	0.9875	0.9888	0.9900	0.9913		220
8	0.9925	0.9938	0.9950	0.9963	0.9975		230
8	0.9988	1.0000	1.0000	1.0000	1.0000		240
9 ENDTBL							250
2 XSECTN 17		1.0	40.1				A 10
8		30.3	0.0	0.0			A 20
8		31.0	20.0	2.3			A 30
8		32.0	60.0	6.8			A 40
8		33.0	120.0	13.6			A 50
8		34.0	200.0	22.7			A 60
8		35.0	320.0	36.3			A 70
8		36.0	450.0	51.0			A 80
8		36.5	520.0	58.9			A 90
8		37.0	580.0	65.7			A100
8		37.5	640.0	72.5			A110
8		38.0	700.0	79.3			A120
8		38.5	760.0	86.1			A130
8		39.0	800.0	88.4			A140
8		39.5	850.0	88.5			A150
8		40.0	880.0	88.6			A160
8		40.5	925.0	100.1			A170
8		41.0	1057.0	146.9			A180
8		41.5	1321.0	228.9			A190
8		42.0	1753.0	346.5			A200
8		42.5	2583.0	500.7			A210

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

9	ENDTBL					A220
2	XSECTN	18	1.0	40.1		A230
8			34.7	0.0	0.0	A240
8			35.0	3.0	0.6	A250
8			35.5	15.0	3.6	A260
8			36.0	33.0	7.8	A270
8			36.5	60.0	14.4	A280
8			37.0	78.0	18.3	A290
8			37.5	105.0	22.5	A300
8			38.0	123.0	22.6	A310
8			38.5	147.0	22.7	A320
8			39.0	165.0	22.8	A330
8			39.5	180.0	22.9	A340
8			40.0	192.0	23.0	A350
8			40.5	243.0	49.0	A360
8			41.0	460.0	128.2	A370
8			41.5	868.0	249.0	A380
8			42.0	1502.0	412.0	A390
8			42.5	2386.0	616.0	A400
9	ENDTBL					A410
3	STRUCT	33				B 10
8			6104.5	0.0	0.0	B 20
8			6106.0	30.0	0.8	B 30
8			6107.0	70.0	2.1	B 40
8			6108.0	120.0	4.0	B 50
8			6109.0	170.0	6.4	B 60
8			6110.0	210.0	9.1	B 70
8			6111.0	250.0	12.1	B 80
8			6112.0	280.0	15.5	B 90
8			6113.0	310.0	19.2	B100
8			6113.5	335.0	21.2	B110
8			6114.0	420.0	23.3	B120
8			6114.5	545.0	25.4	B130
8			6115.0	705.0	27.6	B140
8			6115.5	895.0	29.9	B150
8			6116.0	1105.0	32.2	B160
8			6116.5	1350.0	34.6	B170
8			6117.0	1615.0	37.1	B180
8			6117.5	1910.0	39.7	B190
8			6118.0	2225.0	42.3	B200
8			6118.5	3050.0	45.1	B210
9	ENDTBL					B220
6	RUNOFF	1 1 1	0.102	73.0	0.32	260
6	REACH	3 2 1 2	500.0	0.92	1.51	270
6	RUNOFF	1 2 3	0.094	77.0	0.32	280
6	ADDHYD	4 2 2 3 1				290

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

6 REACH	3	3	1	2	2300.0	0.71	1.49	300
6 RUNOFF	1	3		3	0.169	75.0	0.45	310
6 ADDHYD	4	3	2	3				320
6 REACH	3	4	1	2	550.0	1.70	1.46	330
6 RUNOFF	1	4		3	0.183	75.0	0.40	340
6 ADDHYD	4	4	2	3				350
6 REACH	3	5	1	2	1800.0	1.05	1.47	360
6 RUNOFF	1	5		3	0.097	71.0	0.38	370
6 ADDHYD	4	5	2	3				380
6 REACH	3	6	1	2	1400.0	0.45	1.63	390
6 RUNOFF	1	6		3	0.116	73.0	0.52	400
6 ADDHYD	4	6	2	3				410
6 REACH	3	7	1	2	1500.0	1.59	1.33	420
6 RUNOFF	1	7		3	0.095	88.0	0.32	430
6 ADDHYD	4	7	2	3				440
6 RUNOFF	1	8		2	0.100	84.0	0.52	450
6 REACH	3	9	2	3	2400.0	1.43	1.33	460
6 RUNOFF	1	9		2	0.145	81.0	0.57	470
6 ADDHYD	4	9	3	2				480
6 REACH	3	10	1	2	3250.0	1.82	1.33	490
6 REACH	3	10	4	3	1450.0	4.35	1.44	500
6 ADDHYD	4	10	2	3				510
6 RUNOFF	1	10		2	0.144	76.0	0.42	520
6 ADDHYD	4	10	1	2				530
6 RUNOFF	1	11		1	0.134	75.0	0.30	540
6 REACH	3	12	1	2	1150.0	2.62	1.33	550
6 RUNOFF	1	12		1	0.081	76.0	0.32	560
6 ADDHYD	4	12	2	1				570
6 REACH	3	13	1	1	3550.0	6.75	1.40	580
6 RUNOFF	1	13		2	0.131	76.0	0.38	590
6 ADDHYD	4	13	1	2				600
6 RUNOFF	1	14		2	0.122	73.0	0.40	610
6 REACH	3	15	4	1	900.0	6.04	1.42	620
6 REACH	3	15	2	4	3700.0	2.26	1.33	630
6 ADDHYD	4	15	1	4				640
6 RUNOFF	1	15		1	0.103	76.0	0.40	650
6 ADDHYD	4	15	2	1				660
6 RUNOFF	1	16		2	0.108	80.0	0.42	670
6 REACH	3	17	4	1	2300.0	1.89	1.33	680
6 REACH	3	17	2	4	2700.0	0.95	1.51	690
6 ADDHYD	4	17	1	4				700
6 RUNOFF	1	17		1	0.109	78.0	0.40	710
6 ADDHYD	4	17	2	1				720
6 ADDHYD	4	17	3	1				730
6 DIVERT	6	17	1	7		0.59	18.	740
6 REACH	3	18	2	3	3850.0	0.80	1.45	750

*****#80-90 LIST OF INPUT DATA (CONTINUED)*****

6 RUNOFF	1	18	2	0.150	74.0	0.80	760
6 ADDHYD	4	18	3 2 1				770
6 RUNOFF	1	19	2	0.078	77.0	0.30	780
6 RUNOFF	1	20	3	0.150	74.0	0.40	790
6 REACH	3	21	3 4	2300.0	3.07	1.33	800
6 RUNOFF	1	21	3	0.089	75.0	0.35	810
6 ADDHYD	4	21	4 3 5				820
6 RUNOFF	1	22	3	0.134	75.0	0.37	830
6 REACH	3	23	3 4	3100.0	1.59	1.33	840
6 RUNOFF	1	23	3	0.148	77.0	0.47	850
6 ADDHYD	4	23	4 3 6				860
6 REACH	3	23	2 3	3700.0	9.64	1.34	870
6 ADDHYD	4	23	6 3 2				880
6 ADDHYD	4	23	5 2 3				890
6 RUNOFF	1	24	2	0.097	75.0	0.37	900
6 REACH	3	25	2 4	2350.0	1.33	1.33	910
6 RUNOFF	1	25	2	0.111	77.0	0.38	920
6 ADDHYD	4	25	4 2 6				930
6 RUNOFF	1	26	2	0.102	75.0	0.37	940
6 REACH	3	26	2 4	1800.0	2.52	1.33	950
6 RUNOFF	1	27	2	0.108	75.0	0.35	960
6 ADDHYD	4	27	4 2 5				970
6 REACH	3	27	3 2	1750.0	0.75	1.53	980
6 ADDHYD	4	27	5 2 3				990
6 REACH	3	28	6 2	3400.0	2.47	1.33	1000
6 RUNOFF	1	28	4	0.103	80.0	0.30	1010
6 ADDHYD	4	28	2 4 5				1020
6 REACH	3	28	3 4	2250.0	2.52	1.33	1030
6 ADDHYD	4	28	5 4 2				1040
6 RUNOFF	1	29	3	0.156	76.0	0.37	1050
6 RUNOFF	1	30	4	0.156	83.0	0.37	1060
6 REACH	3	31	4 5	2000.0	4.55	1.40	1070
6 RUNOFF	1	31	4	0.159	79.0	0.40	1080
6 ADDHYD	4	31	5 4 6				1090
6 REACH	3	32	6 4	1700.0	3.18	1.46	1100
6 RUNOFF	1	32	5	0.169	79.0	0.35	1110
6 ADDHYD	4	32	4 5 6				1120
6 REACH	3	33	2 4	2900.0	1.75	1.33	1130
6 RUNOFF	1	33	5	0.156	86.0	0.35	1140
6 ADDHYD	4	33	4 5 2				1150
6 REACH	3	33	3 4	1200.0	0.88	1.49	1160
6 REACH	3	33	6 3	1300.0	0.98	1.46	1170
6 ADDHYD	4	33	2 4 5				1180
6 ADDHYD	4	33	3 5 2				1190
6 RESVOR	2	33	2 3	6105.0			1200
6 REACH	3	34	3 2	2450.0	0.67	1.44	1210

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

5 RUNOFF	1	34	3	0.138	75.0	0.48	1220
6 ADDHYD	4	34	2 3 4				1230
6 ADDHYD	4	34	1 4 2				1240
6 REACH	3	35	2 1	1250.0	2.47	1.51	1250
6 RUNOFF	1	35	2	0.139	76.0	0.43	1260
6 ADDHYD	4	35	1 2 3				1270
6 REACH	3	36	3 1	700.0	0.21	1.52	1280
6 RUNOFF	1	36	2	0.122	81.0	0.45	1290
6 ADDHYD	4	36	1 2 3				1300
6 RUNOFF	1	37	1	0.128	79.0	0.37	1310
6 RUNOFF	1	38	2	0.186	76.0	0.67	1320
6 RUNOFF	1	39	4	0.152	77.0	0.55	1330
6 REACH	3	40	4 5	1800.0	1.13	1.33	1340
6 RUNOFF	1	40	4	0.172	74.0	0.38	1350
6 ADDHYD	4	40	5 4 6				1360
6 REACH	3	40	3 4	2650.0	0.21	1.52	1370
6 REACH	3	40	1 3	1050.0	0.22	1.59	1380
6 REACH	3	40	2 5	650.0	0.22	1.59	1390
6 ADDHYD	4	40	6 3 1				1400
6 ADDHYD	4	40	5 1 3				1410
6 ADDHYD	4	40	4 3 1				1420
6 REACH	3	41	1 2	1700.0	0.20	1.52	1430
6 RUNOFF	1	41	1	0.153	77.0	0.50	1440
6 ADDHYD	4	41	2 1 3				1450
6 RUNOFF	1	42	1	0.141	76.0	0.63	1460
6 REACH	3	43	1 2	500.0	4.27	1.42	1470
6 RUNOFF	1	43	1	0.131	77.0	0.73	1480
6 ADDHYD	4	43	2 1 4				1490
6 REACH	3	44	4 1	2750.0	3.97	1.44	1500
6 RUNOFF	1	44	2	0.092	75.0	0.38	1510
6 ADDHYD	4	44	1 2 4				1520
6 REACH	3	45	4 1	2800.0	3.97	1.44	1530
6 RUNOFF	1	45	2	0.100	78.0	0.40	1540
6 ADDHYD	4	45	1 2 4				1550
6 ADDHYD	4	45	3 4 1				1560
6 RUNOFF	1	46	2	0.138	77.0	0.43	1570
6 REACH	3	47	2 3	4050.0	2.26	1.33	1580
6 RUNOFF	1	47	2	0.155	75.0	0.38	1590
6 ADDHYD	4	47	3 2 4				1600
6 RUNOFF	1	48	2	0.134	78.0	0.53	1610
6 REACH	3	49	2 3	3600.0	1.51	1.33	1620
6 RUNOFF	1	49	2	0.083	75.0	0.42	1630
6 ADDHYD	4	49	3 2 5				1640
6 RUNOFF	1	50	2	0.120	78.0	0.70	1650
6 REACH	3	51	5 3	2100.0	1.51	1.33	1660
6 REACH	3	51	2 5	2600.0	1.43	1.33	1670

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

6	ADDHYD	1	51	3 5 2				1680
6	RUNOFF	1	51	3	0.094	85.0	0.37	1690
6	ADDHYD	1	51	2 3 5				1700
6	REACH	3	52	5 2	2700.0	1.51	1.33	1710
6	RUNOFF	1	52	3	0.139	77.0	0.50	1720
6	ADDHYD	1	52	2 3 5				1730
6	ADDHYD	1	52	4 5 2				1740
6	REACH	3	52	1 3	1250.0	0.21	1.52	1750
6	ADDHYD	1	52	2 3 1				1760
6	RUNOFF	1	53	2	0.142	75.0	0.47	1770
6	REACH	3	54	1 3	1800.0	0.19	1.52	1780
6	REACH	3	54	2 1	850.0	3.19	1.33	1790
6	RUNOFF	1	54	4	0.167	79.0	0.47	1800
6	ADDHYD	1	54	1 4 2				1810
6	ADDHYD	1	54	3 2 1				1820
6	RUNOFF	1	55	2	0.123	89.0	0.58	1830
6	ADDHYD	1	55	1 2 3				1840
6	REACH	3	56	3 1	1900.0	0.48	1.53	1850
6	RUNOFF	1	56	2	0.159	83.0	0.38	1860
6	ADDHYD	1	56	1 2 3				1870
6	RUNOFF	1	57	1	0.158	80.0	0.42	1880
6	RUNOFF	1	58	2	0.106	79.0	0.35	1890
6	REACH	3	59	1 4	1350.0	5.05	1.42	1900
6	REACH	3	59	2 5	1900.0	2.42	1.33	1910
6	ADDHYD	1	59	4 5 1				1920
6	RUNOFF	1	59	2	0.114	76.0	0.32	1930
6	ADDHYD	1	59	1 2 4				1940
6	REACH	3	60	4 1	1200.0	3.31	1.42	1950
6	RUNOFF	1	60	2	0.117	76.0	0.33	1960
6	ADDHYD	1	60	1 2 4				1970
6	REACH	3	61	4 1	1800.0	4.35	1.44	1980
6	RUNOFF	1	61	2	0.130	84.0	0.37	1990
6	ADDHYD	1	61	1 2 4				2000
6	RUNOFF	1	62	1	0.178	87.0	0.25	2010
6	REACH	3	63	1 2	1400.0	6.43	1.40	2020
6	RUNOFF	1	63	1	0.131	89.0	0.38	2030
6	ADDHYD	1	63	2 1 5				2040
6	ADDHYD	1	63	4 5 1				2050
6	REACH	3	64	1 2	1250.0	1.43	1.33	2060
6	RUNOFF	1	64	1	0.106	85.0	0.45	2070
6	ADDHYD	1	64	2 1 4				2080
6	REACH	3	65	4 1	1600.0	1.51	1.33	2090
6	RUNOFF	1	65	2	0.094	77.0	0.33	2100
6	ADDHYD	1	65	1 2 4				2110
6	RUNOFF	1	66	1	0.116	89.0	0.38	2120
6	ADDHYD	1	66	1 4 2				2130

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

6 REACH	3	67	2	1	4300.0	1.29	1.51		2140
6 RUNOFF	1	67		2	0.164	78.0	0.38		2150
6 ADDHYD	4	67	1	2					2160
6 RUNOFF	1	68		1	0.109	91.0	0.27		2170
6 ADDHYD	4	68	4	1					2180
6 ADDHYD	4	68	3	2					2190
6 RUNOFF	1	69		2	0.106	83.0	0.40		2200
6 REACH	3	70	2	3	1500.0	0.67	1.50		2210
6 RUNOFF	1	70		2	0.163	80.0	0.35		2220
6 ADDHYD	4	70	3	2					2230
6 REACH	3	71	4	2	2950.0	1.42	1.33		2240
6 RUNOFF	1	71		3	0.150	89.0	0.48		2250
6 ADDHYD	4	71	2	3					2260
6 REACH	3	71	1	2	650.0	0.79	1.33		2270
6 ADDHYD	4	71	4	2					2280
6 REACH	3	72	1	2	1300.0	0.14	1.50		2290
6 RUNOFF	1	72		1	0.114	87.0	0.33		2300
6 ADDHYD	4	72	2	1					2310
6 RUNOFF	1	73		1	0.150	92.0	0.27		2320
6 RUNOFF	1	74		2	0.114	86.0	0.30		2330
6 ADDHYD	4	74	1	2					2340
6 REACH	3	74	3	1	1500.0	0.22	1.51		2350
6 ADDHYD	4	74	4	1					2360
6 RUNOFF	1	75		1	0.113	81.0	0.38		2370
6 RUNOFF	1	76		3	0.086	83.0	0.43		2380
6 ADDHYD	4	76	1	3					2390
6 REACH	3	76	2	1	1450.0	0.20	1.51		2400
6 ADDHYD	4	76	4	1					2410
6 REACH	3	77	2	1	1050.0	0.16	1.50		2420
6 RUNOFF	1	77		2	0.141	84.0	0.37		2430
6 ADDHYD	4	77	1	2					2440
6 REACH	3	78	3	1	2450.0	0.19	1.51		2470
6 RUNOFF	1	78		2	0.136	84.0	0.55		2480
6 ADDHYD	4	78	1	2					2490
ENDATA									2500
7 INCREM	6				0.05				2510
7 COMPUT	7	001	078		0.0	3.10	1.0	7 2 01 01	2520
ENDCMP	1								2530
7 INCREM	6				0.05				2540
7 COMPUT	7	001	078		0.0	4.50	1.0	7 2 01 02	2550
ENDCMP	1								2560
ENDJOB	2								2570

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

COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY USER NOTES

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

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

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

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

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

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

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

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

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

PROGRAM CHANGES SINCE MAY 1982:

12/17/82 - CORRECT PEAK RATE FACTOR FOR USER ENTERED DIMHYD
 CORRECT REACH ROUTING PEAK TRAVEL TIME PRINTED WITH FULLPRINT OPTION

5/02/83 - CORRECT COMPUTATIONS FOR ---

1. DIVISION OF BASEFLOW IN DIVERT OPERATION
2. HYDROGRAPH VOLUME SPLIT BETWEEN BASEFLOW AND ABOVE BASEFLOW
3. CROSS SECTION DATA PLOTTING POSITION
4. INTERMEDIATE PEAK WHEN "FROM" AREA IS LARGER THAN "THRU" AREA
5. STORAGE ROUTED REACH TRAVEL TIME FOR MULTIPLE PEAK HYDROGRAPH
6. ORDERING "FLOW-FREQ" FILE FROM SUMMARY TABLE #3 DATA
7. BASEFLOW ENTERED WITH READHYD
8. LOW FLOW SPLIT DURING DIVERT PROCEDURE #2 WHEN SECTION RATINGS START AT DIFFERENT ELEVATIONS

ENHANCEMENTS ---

1. REPLACE USER MANUAL ERROR CODES (PAGE 4-9 TO 4-11) WITH MESSAGES
2. LABEL OUTPUT HYDROGRAPH FILES WITH CROSS SECTION/STRUCTURE, ALTERNATE AND STORM NO'S

09/01/83 - CORRECT INPUT AND OUTPUT ERRORS FOR INTERMEDIATE PEAKS

CORRECT COMBINATION OF RATING TABLES FOR DIVERT

CHECK REACH ROUTING PARAMETERS FOR ACCEPTABLE LIMITS

ELIMINATE MINIMUM REACH TRAVEL TIME WHEN ATT-KIN COEFFICIENT EQUALS ONE

TR20 XEQ 9/ 2/93 9: 1 SHOOKS RUN 90-909 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING 20 JOB 1 PASS 1
 REV 9C/09/83 PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU 30 PAGE 2

EXECUTIVE CONTROL OPERATION INCREM MAIN TIME INCREMENT = .05 HOURS RECORD ID 2510

EXECUTIVE CONTROL OPERATION COMPUT FROM XSECTION 1 TO XSECTION 78 RECORD ID 2520
 STARTING TIME = .00 RAIN DEPTH = 3.10 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
 ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .05 HOURS

*** WARNING REACH 2 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 4 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 6 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 7 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 10 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 12 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 13 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 15 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 23 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 27 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 31 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 32 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 33 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	1222.30	(NULL)
10.02	50.84	(NULL)
12.97	39.26	(NULL)

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .05 HOURS	DRAINAGE AREA = 1.92 SQ.MI.
5.50 DISCHG	.00 .56 3.35 12.45 33.60 73.43 138.39 231.97 353.67 500.26		
6.00 DISCHG	666.55 842.30 1007.70 1136.80 1209.07 1220.34 1180.89 1107.48 1015.29 915.14		
6.50 DISCHG	814.99 719.06 629.93 549.40 478.34 416.82 364.46 320.57 284.28 254.57		
7.00 DISCHG	230.46 210.98 195.04 181.56 169.69 158.94 149.24 140.60 133.01 126.44		
7.50 DISCHG	120.83 116.10 112.17 108.98 106.44 104.46 102.96 101.83 100.99 100.39		

TR20 XEQ 9/ 2/93 9: 1 SHOCKS RUN 90-909 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING 20 JOB 1 PASS 1
 REV PD/09/93 PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU 30 PAGE 3

8.00	DISCHG	99.95	99.53	98.82	97.37	94.87	91.33	87.07	82.47	77.86	73.48
8.50	DISCHG	69.46	65.88	62.76	60.12	57.94	56.18	54.78	53.69	52.85	52.21
9.00	DISCHG	51.73	51.37	51.10	50.91	50.78	50.68	50.62	50.59	50.57	50.57
9.50	DISCHG	50.57	50.59	50.61	50.63	50.66	50.68	50.71	50.74	50.77	50.81
10.00	DISCHG	50.83	50.83	50.73	50.42	49.85	49.01	47.99	46.87	45.72	44.61
10.50	DISCHG	43.56	42.60	41.75	41.04	40.47	40.03	39.71	39.47	39.28	39.13
11.00	DISCHG	38.99	38.87	38.77	38.70	38.67	38.67	38.69	38.73	38.76	38.79
11.50	DISCHG	38.77	38.75	38.72	38.71	38.72	38.75	38.80	38.86	38.90	38.93
12.00	DISCHG	38.93	38.91	38.89	38.88	38.89	38.92	38.97	39.03	39.07	39.09
12.50	DISCHG	39.09	39.08	39.05	39.04	39.05	39.09	39.14	39.19	39.24	39.26
13.00	DISCHG	39.26	39.23	39.15	38.99	38.75	38.41	38.01	37.58	37.13	36.69
13.50	DISCHG	36.26	35.85	35.49	35.19	34.96	34.80	34.70	34.63	34.57	34.52
14.00	DISCHG	34.46	34.39	34.30	34.17	34.00	33.79	33.56	33.32	33.09	32.87
14.50	DISCHG	32.67	32.50	32.36	32.24	32.14	32.07	32.01	31.96	31.93	31.91

RUNOFF VOLUME ABOVE BASEFLOW = 1.03 WATERSHED INCHES. 1279.26 CFS-HRS. 105.72 ACRE-FEET: BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.00	10.00	6105.00
6.49	842.58	6115.36
13.10	39.14	6106.23

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .05 HOURS	DRAINAGE AREA = 1.92 SQ.MI.
.00	DISCHG 10.00 8.56 7.33 6.28 5.37 4.60 3.94 3.37 2.89 2.47		
.50	DISCHG 2.12 1.81 1.55 1.33 1.14 .97 .83 .71 .61 .52		
1.00	DISCHG .45 .38 .33 .28 .24 .21 .18 .15 .13 .11		
1.50	DISCHG .09 .08 .07 .06 .05 .04 .04 .03 .03 .02		
2.00	DISCHG .02 .02 .01 .01 .01 .01 .01 .01 .01 .00		
2.50	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00		
3.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00		
3.50	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00		
4.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00		
4.50	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00		
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00		
5.50	DISCHG .00 .04 .32 1.41 4.52 11.56 25.13 45.09 74.06 110.45		
6.00	DISCHG 151.40 192.43 233.42 268.96 299.63 351.05 508.23 667.29 777.83 832.47		
6.50	DISCHG 841.97 820.12 777.66 722.84 666.39 609.22 552.11 505.06 460.67 419.14		
7.00	DISCHG 391.88 365.46 340.39 329.10 321.37 313.46 307.02 301.67 296.24 290.75		
7.50	DISCHG 285.25 279.73 273.80 267.95 262.22 256.60 251.13 243.71 236.08 228.82		
8.00	DISCHG 221.93 215.37 209.05 202.46 196.14 190.02 184.03 178.14 172.32 166.24		
8.50	DISCHG 157.50 150.09 143.01 136.28 129.90 123.89 117.81 111.25 105.27 99.83		
9.00	DISCHG 94.89 90.42 86.38 82.73 79.45 76.48 73.82 71.43 69.16 66.94		
9.50	DISCHG 64.98 63.26 61.75 60.42 59.25 58.22 57.32 56.53 55.84 55.24		
10.00	DISCHG 54.71 54.25 53.83 53.44 53.05 52.62 52.12 51.56 50.93 50.24		
10.50	DISCHG 49.51 48.74 47.95 47.17 46.40 45.67 44.97 44.33 43.74 43.20		
11.00	DISCHG 42.70 42.25 41.84 41.47 41.14 40.84 40.58 40.36 40.17 40.00		

TR20 XEQ	8/ 2/93	9: 1	SHOOKS RUN 90-809 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING	20	JOB 1	PASS 1
REV	PC/09/93		PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU	30		PAGE 4

11.50	DISCHG	39.85	39.72	39.60	39.50	39.40	39.33	39.26	39.21	39.17	39.14
12.00	DISCHG	39.11	39.09	39.07	39.04	39.03	39.01	39.00	39.00	39.01	39.02
12.50	DISCHG	39.03	39.03	39.04	39.04	39.04	39.04	39.05	39.07	39.09	39.10
13.00	DISCHG	39.12	39.14	39.14	39.13	39.10	39.04	38.94	38.80	38.63	38.42
13.50	DISCHG	38.19	37.94	37.67	37.39	37.11	36.85	36.59	36.36	36.15	35.96
14.00	DISCHG	35.78	35.62	35.47	35.32	35.17	35.02	34.86	34.69	34.51	34.33
14.50	DISCHG	34.14	33.96	33.77	33.60	33.43	33.27	33.12	32.99	32.86	32.75

RUNOFF VOLUME ABOVE BASEFLOW = 1.03 WATERSHED INCHES. 1271.43 CFS-HRS. 105.07 ACRE-FEET: BASEFLOW = .00 CFS

*** WARNING REACH 35 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 43 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 45 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 56 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 59 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 61 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 63 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 64 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 65 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 71 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 77 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

EXECUTIVE CONTROL OPERATION ENDCMP	COMPUTATIONS COMPLETED FOR PASS 1	RECORD ID	2530
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EXECUTIVE CONTROL OPERATION INCREM	MAIN TIME INCREMENT = .05 HOURS	RECORD ID	2540
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EXECUTIVE CONTROL OPERATION COMPUT FROM XSECTION 1 TO XSECTION 78 RECORD ID 2550
 STARTING TIME = .00 RAIN DEPTH = 4.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 AMT. MOIST. COND= 2
 ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .05 HOURS

*** WARNING REACH 2 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 4 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 5 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 6 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 7 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 10 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 12 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 13 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 15 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 23 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 27 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 28 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 31 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 32 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 33 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
 *** WARNING REACH 33 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	2620.09	(NULL)
10.00	86.80	(NULL)
12.96	66.40	(NULL)

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.05 HOURS	DRAINAGE AREA =	1.92 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.01 .04 .14 .38 .79
5.50	DISCHG	1.51	4.61	15.61	47.51	116.51 236.51 414.71 649.37 932.64 1254.39

6.00	DISCHG	1601.44	1952.47	2269.06	2501.89	2612.03	2593.10	2467.36	2268.96	2031.25	1781.50
6.50	DISCHG	1540.83	1320.40	1125.97	959.84	820.95	706.08	611.74	534.70	472.21	421.88
7.00	DISCHG	381.71	349.83	324.19	302.79	283.98	266.84	251.18	237.03	224.41	213.39
7.50	DISCHG	204.02	196.22	189.88	194.85	180.99	178.08	175.92	174.34	173.20	172.39
8.00	DISCHG	171.80	171.22	170.05	167.54	163.07	156.66	148.89	140.42	131.89	123.80
8.50	DISCHG	116.51	110.15	104.79	100.41	96.94	94.24	92.18	90.62	89.45	88.58
9.00	DISCHG	87.94	87.47	87.13	86.89	86.72	86.61	86.54	86.51	86.49	86.49
9.50	DISCHG	86.50	86.52	86.54	86.57	86.60	86.63	86.67	86.70	86.74	86.77
10.00	DISCHG	86.80	86.78	86.58	86.03	84.98	83.46	81.59	79.53	77.42	75.38
10.50	DISCHG	73.48	71.79	70.33	69.14	68.23	67.55	67.08	66.75	66.51	66.32
11.00	DISCHG	66.13	65.96	65.81	65.70	65.64	65.65	65.70	65.77	65.83	65.86
11.50	DISCHG	65.85	65.81	65.75	65.71	65.71	65.75	65.83	65.92	65.99	66.03
12.00	DISCHG	66.02	65.98	65.93	65.89	65.89	65.93	66.01	66.10	66.17	66.21
12.50	DISCHG	66.21	66.17	66.11	66.08	66.08	66.12	66.19	66.29	66.36	66.39
13.00	DISCHG	66.38	66.32	66.17	65.88	65.43	64.81	64.08	63.30	62.48	61.68
13.50	DISCHG	60.91	60.20	59.58	59.08	58.71	58.46	58.31	58.23	58.17	58.11
14.00	DISCHG	58.03	57.91	57.76	57.54	57.24	56.86	56.44	56.01	55.59	55.20
14.50	DISCHG	54.85	54.56	54.32	54.12	53.97	53.86	53.77	53.71	53.66	53.63

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES. 2483.54 CFS-HRS. 205.24 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.00	10.00	6105.00
6.34	2347.33	6118.07
13.07	66.25	6106.91

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS						TIME INCREMENT = .05 HOURS			DRAINAGE AREA = 1.92 SQ.MI.		
.00	DISCHG	10.00	8.56	7.33	6.28	5.37	4.60	3.94	3.37	2.89	2.47	
.50	DISCHG	2.12	1.81	1.55	1.33	1.14	.97	.83	.71	.61	.52	
1.00	DISCHG	.45	.38	.33	.28	.24	.21	.18	.15	.13	.11	
1.50	DISCHG	.09	.08	.07	.06	.05	.04	.04	.03	.03	.02	
2.00	DISCHG	.02	.02	.01	.01	.01	.01	.01	.01	.01	.00	
2.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
3.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
3.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
4.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
4.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.02	.05	.13	
5.50	DISCHG	.28	.68	2.03	6.28	17.17	38.38	72.35	119.76	173.75	226.59	
6.00	DISCHG	277.39	338.03	722.09	1247.40	1720.41	2063.35	2272.81	2344.97	2210.45	2088.69	
6.50	DISCHG	1917.51	1732.19	1542.97	1363.29	1198.15	1051.92	927.17	821.35	728.65	652.62	
7.00	DISCHG	587.09	531.81	489.14	450.67	417.34	395.43	374.37	354.27	335.20	329.21	
7.50	DISCHG	323.14	316.95	310.71	306.40	302.33	298.28	294.29	290.36	286.52	282.77	
8.00	DISCHG	279.05	275.20	271.45	267.78	264.11	260.37	256.52	252.52	247.53	241.11	
8.50	DISCHG	234.63	228.12	221.65	215.27	208.91	202.18	195.71	189.51	183.60	177.98	
9.00	DISCHG	172.65	166.68	160.12	154.09	148.54	143.43	138.74	134.43	130.47	126.84	

TR20 XEQ	8/ 2/93	9: 1	SHOOKS RUN 90-809	TYPE IIA DIST.	FUT. COND.-EXIST.	ROUTING	20	JOB	1	PASS	2
REV	PC/09/83		PASS 1=10-YEAR 24-HOUR	PASS 2=100-YEAR 24-HOUR	SHKFD	30		PAGE			7

9.50	DISCHG	123.51	120.46	117.07	113.93	111.11	108.58	106.32	104.29	102.18	100.86
10.00	DISCHG	99.41	98.11	96.93	95.83	94.77	93.68	92.53	91.30	89.97	88.57
10.50	DISCHG	87.11	85.62	84.12	82.64	81.20	79.82	78.53	77.34	76.23	75.22
11.00	DISCHG	74.29	73.44	72.66	71.95	71.30	70.72	70.20	69.70	69.23	68.83
11.50	DISCHG	68.47	68.16	67.87	67.62	67.39	67.19	67.02	66.89	66.77	66.68
12.00	DISCHG	66.60	66.53	66.46	66.40	66.34	66.29	66.25	66.23	66.21	66.21
12.50	DISCHG	66.21	66.21	66.20	66.19	66.17	66.17	66.16	66.17	66.19	66.21
13.00	DISCHG	66.23	66.25	66.25	66.22	66.15	66.03	65.84	65.58	65.26	64.88
13.50	DISCHG	64.45	63.99	63.50	63.00	62.51	62.04	61.60	61.20	60.84	60.52
14.00	DISCHG	60.23	59.96	59.70	59.46	59.21	58.95	58.68	58.39	58.08	57.75
14.50	DISCHG	57.43	57.10	56.78	56.48	56.19	55.92	55.66	55.43	55.22	55.04

RUNOFF VOLUME ABOVE BASEFLOW = 2.00 WATERSHED INCHES. 2467.36 CFS-HRS. 203.90 ACRE-FEET: BASEFLOW = .00 CFS

*** WARNING REACH 35 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

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

*** WARNING REACH 43 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 45 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 52 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 56 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 59 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 61 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 63 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 64 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 65 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 67 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 71 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 72 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

TR20 XED 8/ 2/93	9: 1	SHOOKS RUN 90-809 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING	20	JOB 1	PASS 2
REV PC/09/83		PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFLU	30		PAGE 8

*** WARNING REACH 74 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 76 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 77 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

EXECUTIVE CONTROL OPERATION ENDCMP	COMPUTATIONS COMPLETED FOR PASS 2	RECORD ID	2560
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EXECUTIVE CONTROL OPERATION ENDOJ02	RECORD ID	2570
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SUMMARY TABLE 1 - SELECTED RESULTS OF STANDARD AND EXECUTIVE CONTROL INSTRUCTIONS IN THE ORDER PERFORMED
 (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
 A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION	1	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.78	---	6.10	69.79	684.2
XSECTION	2	REACH	.10	7	2	.05	.0	3.10	24.00	.78	---	6.10	69.79	684.2
XSECTION	2	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.98	---	6.09	82.84	881.3
XSECTION	2	ADDHYD	.20	7	2	.05	.0	3.10	24.00	.88	---	6.10	152.57	778.4
XSECTION	3	REACH	.20	7	2	.05	.0	3.10	24.00	.87	---	6.20	132.49	676.0
XSECTION	3	RUNOFF	.17	7	2	.05	.0	3.10	24.00	.87	---	6.17	109.05	645.3
XSECTION	3	ADDHYD	.37	7	2	.05	.0	3.10	24.00	.87	---	6.19	240.17	658.0
XSECTION	4	REACH	.37	7	2	.05	.0	3.10	24.00	.87	---	6.19	240.17	658.0
XSECTION	4	RUNOFF	.18	7	2	.05	.0	3.10	24.00	.87	---	6.14	124.48	680.2
XSECTION	4	ADDHYD	.55	7	2	.05	.0	3.10	24.00	.87	---	6.17	361.84	660.3
XSECTION	5	REACH	.55	7	2	.05	.0	3.10	24.00	.87	---	6.24	351.59	641.6
XSECTION	5	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.69	---	6.14	51.28	528.7
XSECTION	5	ADDHYD	.64	7	2	.05	.0	3.10	24.00	.84	---	6.23	394.51	611.6
XSECTION	6	REACH	.64	7	2	.05	.0	3.10	24.00	.84	---	6.30	389.93	604.5
XSECTION	6	RUNOFF	.12	7	2	.05	.0	3.10	24.00	.78	---	6.22	58.47	504.0
XSECTION	6	ADDHYD	.76	7	2	.05	.0	3.10	24.00	.83	---	6.29	444.99	584.7
XSECTION	7	REACH	.76	7	2	.05	.0	3.10	24.00	.83	---	6.36	435.58	572.4
XSECTION	7	RUNOFF	.09	7	2	.05	.0	3.10	24.00	1.70	---	6.07	146.13	1538.2
XSECTION	7	ADDHYD	.96	7	2	.05	.0	3.10	24.00	.93	---	6.34	481.97	563.1
XSECTION	8	RUNOFF	.10	7	2	.05	.0	3.10	24.00	1.41	---	6.19	99.97	999.7
XSECTION	9	REACH	.10	7	2	.05	.0	3.10	24.00	1.40	---	6.32	89.57	895.7
XSECTION	9	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.21	---	6.23	115.07	793.6
XSECTION	9	ADDHYD	.25	7	2	.05	.0	3.10	24.00	1.29	---	6.27	201.15	921.0
XSECTION	10	REACH	.86	7	2	.05	.0	3.10	24.00	.93	---	6.44	455.55	532.2
XSECTION	10	REACH	.25	7	2	.05	.0	3.10	24.00	1.29	---	6.27	201.15	821.0
XSECTION	10	ADDHYD	1.10	7	2	.05	.0	3.10	24.00	1.01	---	6.40	625.06	567.7
XSECTION	10	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.93	---	6.15	102.18	709.6
XSECTION	10	ADDHYD	1.24	7	2	.05	.0	3.10	24.00	1.00	---	6.37	679.19	545.5
XSECTION	11	RUNOFF	.13	7	2	.05	.0	3.10	24.00	.88	---	6.08	107.76	804.2
XSECTION	12	REACH	.13	7	2	.05	.0	3.10	24.00	.88	---	6.14	106.13	792.0
XSECTION	12	RUNOFF	.08	7	2	.05	.0	3.10	24.00	.93	---	6.09	67.22	829.9
XSECTION	12	ADDHYD	.22	7	2	.05	.0	3.10	24.00	.90	---	6.12	170.45	792.8

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 1													
XSECTION 13	REACH	.22	7	2	.05	.0	3.10	24.00	.89	---	6.19	166.91	776.3
XSECTION 13	RUNOFF	.13	7	2	.05	.0	3.10	24.00	.93	---	6.12	97.93	747.6
XSECTION 13	ADDHYD	.35	7	2	.05	.0	3.10	24.00	.91	---	6.17	259.90	751.2
XSECTION 14	RUNOFF	.12	7	2	.05	.0	3.10	24.00	.78	---	6.14	72.41	593.5
XSECTION 15	REACH	.35	7	2	.05	.0	3.10	24.00	.91	---	6.17	259.90	751.2
XSECTION 15	REACH	.12	7	2	.05	.0	3.10	24.00	.77	---	6.28	59.45	487.3
XSECTION 15	ADDHYD	.47	7	2	.05	.0	3.10	24.00	.87	---	6.18	311.19	664.9
XSECTION 15	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.93	---	6.14	74.75	725.7
XSECTION 15	ADDHYD	.57	7	2	.05	.0	3.10	24.00	.88	---	6.17	383.82	672.2
XSECTION 16	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.15	---	6.14	97.61	903.8
XSECTION 17	REACH	.57	7	2	.05	.0	3.10	24.00	.88	35.34	6.26	363.64	636.8
XSECTION 17	REACH	.11	7	2	.05	.0	3.10	24.00	1.15	32.45	6.26	87.10	806.5
XSECTION 17	ADDHYD	.68	7	2	.05	.0	3.10	24.00	.92	36.01	6.26	450.72	663.8
XSECTION 17	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.03	---	6.13	89.52	821.2
XSECTION 17	ADDHYD	.79	7	2	.05	.0	3.10	24.00	.94	36.52	6.24	522.49	663.1
XSECTION 17	ADDHYD	2.03	7	2	.05	.0	3.10	24.00	.97	41.21	6.29	1166.48	573.8
XSECTION 17	DIVERT	1.20	7	2	.05	.0	3.10	24.00	1.50	40.49	6.29	924.29	770.6
XSECTION 18	DIVERT	.83	7	2	.05	.0	3.10	24.00	.21	40.49	6.29	242.19	290.6
XSECTION 18	REACH	.83	7	2	.05	.0	3.10	24.00	.21	39.98	6.43	191.47	229.7
XSECTION 18	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.82	---	6.41	58.95	393.0
XSECTION 18	ADDHYD	.98	7	2	.05	.0	3.10	24.00	.30	40.52	6.42	251.18	255.4
XSECTION 19	RUNOFF	.08	7	2	.05	.0	3.10	24.00	.98	---	6.08	70.79	907.6
XSECTION 20	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.83	---	6.14	95.42	636.2
XSECTION 21	REACH	.15	7	2	.05	.0	3.10	24.00	.82	---	6.23	90.24	601.6
XSECTION 21	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.88	---	6.11	65.58	736.9
XSECTION 21	ADDHYD	.24	7	2	.05	.0	3.10	24.00	.84	---	6.17	146.88	614.6
XSECTION 22	RUNOFF	.13	7	2	.05	.0	3.10	24.00	.88	---	6.12	95.53	712.9
XSECTION 23	REACH	.13	7	2	.05	.0	3.10	24.00	.87	---	6.26	77.64	579.4
XSECTION 23	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.98	---	6.17	104.68	707.3
XSECTION 23	ADDHYD	.28	7	2	.05	.0	3.10	24.00	.93	---	6.21	178.28	632.2
XSECTION 23	REACH	.08	7	2	.05	.0	3.10	24.00	.98	---	6.15	68.57	879.1
XSECTION 23	ADDHYD	.36	7	2	.05	.0	3.10	24.00	.94	---	6.19	243.32	675.9
XSECTION 23	ADDHYD	.60	7	2	.05	.0	3.10	24.00	.90	---	6.18	389.81	650.8
XSECTION 24	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.88	---	6.12	69.16	712.9
XSECTION 25	REACH	.10	7	2	.05	.0	3.10	24.00	.87	---	6.25	57.15	589.1
XSECTION 25	RUNOFF	.11	7	2	.05	.0	3.10	24.00	.98	---	6.12	88.32	795.7

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 25	ADDHYD	.21	7	2	.05	.0	3.10	24.00	.93	---	6.17	136.96	658.4	
XSECTION 26	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.88	---	6.12	72.72	712.9	
XSECTION 26	REACH	.10	7	2	.05	.0	3.10	24.00	.97	---	6.21	68.84	674.9	
XSECTION 27	RUNOFF	.11	7	2	.05	.0	3.10	24.00	.88	---	6.11	79.58	736.9	
XSECTION 27	ADDHYD	.21	7	2	.05	.0	3.10	24.00	.88	---	6.15	142.45	678.3	
XSECTION 27	REACH	.60	7	2	.05	.0	3.10	24.00	.90	---	6.25	380.86	635.8	
XSECTION 27	ADDHYD	.81	7	2	.05	.0	3.10	24.00	.89	---	6.23	506.49	626.1	
XSECTION 28	REACH	.21	7	2	.05	.0	3.10	24.00	.93	---	6.29	123.01	591.4	
XSECTION 28	RUNOFF	.10	7	2	.05	.0	3.10	24.00	1.15	---	6.07	110.31	1070.9	
XSECTION 28	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.00	---	6.15	195.71	629.3	
XSECTION 28	REACH	.81	7	2	.05	.0	3.10	24.00	.89	---	6.30	495.09	612.0	
XSECTION 28	ADDHYD	1.12	7	2	.05	.0	3.10	24.00	.92	---	6.28	663.51	592.4	
XSECTION 29	RUNOFF	.16	7	2	.05	.0	3.10	24.00	.93	---	6.12	118.58	760.1	
XSECTION 30	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.34	---	6.10	176.87	1133.8	
XSECTION 31	REACH	.16	7	2	.05	.0	3.10	24.00	1.34	---	6.16	176.00	1128.2	
XSECTION 31	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.09	---	6.13	138.54	871.3	
XSECTION 31	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.21	---	6.14	313.62	995.6	
XSECTION 32	REACH	.31	7	2	.05	.0	3.10	24.00	1.21	---	6.14	313.62	995.6	
XSECTION 32	RUNOFF	.17	7	2	.05	.0	3.10	24.00	1.09	---	6.10	158.65	938.8	
XSECTION 32	ADDHYD	.48	7	2	.05	.0	3.10	24.00	1.17	---	6.13	468.62	968.2	
XSECTION 33	REACH	1.12	7	2	.05	.0	3.10	24.00	.92	---	6.38	631.89	564.2	
XSECTION 33	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.55	---	6.08	210.89	1351.8	
XSECTION 33	ADDHYD	1.28	7	2	.05	.0	3.10	24.00	1.00	---	6.34	708.77	555.5	
XSECTION 33	REACH	.16	7	2	.05	.0	3.10	24.00	.93	---	6.19	114.86	736.3	
XSECTION 33	REACH	.48	7	2	.05	.0	3.10	24.00	1.17	---	6.19	463.94	958.6	
XSECTION 33	ADDHYD	1.43	7	2	.05	.0	3.10	24.00	.99	---	6.30	797.38	556.8	
XSECTION 33	ADDHYD	1.92	7	2	.05	.0	3.10	24.00	1.03	---	6.24	1222.30	637.9	
STRUCTURE 33	RESVOR	1.92	7	2	.05	.0	3.10	24.00	1.03	6115.36	6.49	842.58	439.8	
XSECTION 34	REACH	1.92	7	2	.05	.0	3.10	24.00	1.03	---	6.60	802.66	418.9	
XSECTION 34	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.87	---	6.19	83.96	608.4	
XSECTION 34	ADDHYD	2.05	7	2	.05	.0	3.10	24.00	1.02	---	6.60	831.21	404.7	
XSECTION 34	ADDHYD	3.04	7	2	.05	.0	3.10	24.00	.78	---	6.57	1049.45	345.5	
XSECTION 35	REACH	3.04	7	2	.05	.0	3.10	24.00	.78	---	6.57	1049.45	345.5	
XSECTION 35	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.93	---	6.16	97.10	698.6	
XSECTION 35	ADDHYD	3.18	7	2	.05	.0	3.10	24.00	.79	---	6.56	1078.50	339.5	
XSECTION 36	REACH	3.18	7	2	.05	.0	3.10	24.00	.79	---	6.62	1075.14	338.5	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	1	STORM	1										
XSECTION 36	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.21	---	6.15	113.67	931.7
XSECTION 36	ADDHYD	3.30	7	2	.05	.0	3.10	24.00	.81	---	6.61	1104.47	334.8
XSECTION 37	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.04	---	6.11	109.97	859.1
XSECTION 38	RUNOFF	.19	7	2	.05	.0	3.10	24.00	.92	---	6.31	96.65	519.6
XSECTION 39	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.98	---	6.23	96.40	634.2
XSECTION 40	REACH	.15	7	2	.05	.0	3.10	24.00	.97	---	6.35	87.71	577.1
XSECTION 40	RUNOFF	.17	7	2	.05	.0	3.10	24.00	.83	---	6.13	112.72	655.3
XSECTION 40	ADDHYD	.32	7	2	.05	.0	3.10	24.00	.90	---	6.19	173.13	534.3
XSECTION 40	REACH	3.30	7	2	.05	.0	3.10	24.00	.80	---	6.75	1032.09	312.9
XSECTION 40	REACH	.13	7	2	.05	.0	3.10	24.00	1.03	---	6.21	101.36	791.9
XSECTION 40	REACH	.19	7	2	.05	.0	3.10	24.00	.92	---	6.39	94.85	510.0
XSECTION 40	ADDHYD	.45	7	2	.05	.0	3.10	24.00	.93	---	6.20	274.29	606.8
XSECTION 40	ADDHYD	.64	7	2	.05	.0	3.10	24.00	.93	---	6.24	347.75	545.1
XSECTION 40	ADDHYD	3.94	7	2	.05	.0	3.10	24.00	.82	---	6.71	1170.37	297.3
XSECTION 41	REACH	3.94	7	2	.05	.0	3.10	24.00	.82	---	6.81	1148.38	291.7
XSECTION 41	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.98	---	6.19	104.41	682.4
XSECTION 41	ADDHYD	4.09	7	2	.05	.0	3.10	24.00	.83	---	6.81	1170.72	286.3
XSECTION 42	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.92	---	6.28	76.50	542.6
XSECTION 43	REACH	.14	7	2	.05	.0	3.10	24.00	.92	---	6.28	76.50	542.6
XSECTION 43	RUNOFF	.13	7	2	.05	.0	3.10	24.00	.97	---	6.35	67.99	519.0
XSECTION 43	ADDHYD	.27	7	2	.05	.0	3.10	24.00	.95	---	6.31	143.39	527.2
XSECTION 44	REACH	.27	7	2	.05	.0	3.10	24.00	.95	---	6.38	141.73	521.1
XSECTION 44	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.88	---	6.13	64.44	700.4
XSECTION 44	ADDHYD	.36	7	2	.05	.0	3.10	24.00	.93	---	6.30	175.76	482.9
XSECTION 45	REACH	.36	7	2	.05	.0	3.10	24.00	.93	---	6.37	174.56	479.6
XSECTION 45	RUNOFF	.10	7	2	.05	.0	3.10	24.00	1.03	---	6.13	82.12	821.2
XSECTION 45	ADDHYD	.46	7	2	.05	.0	3.10	24.00	.95	---	6.27	226.11	487.3
XSECTION 45	ADDHYD	4.55	7	2	.05	.0	3.10	24.00	.84	---	6.78	1276.16	280.3
XSECTION 46	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.98	---	6.15	102.72	744.4
XSECTION 47	REACH	.14	7	2	.05	.0	3.10	24.00	.98	---	6.30	85.87	622.3
XSECTION 47	RUNOFF	.16	7	2	.05	.0	3.10	24.00	.88	---	6.13	108.56	700.4
XSECTION 47	ADDHYD	.29	7	2	.05	.0	3.10	24.00	.92	---	6.18	177.18	604.7
XSECTION 48	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.03	---	6.21	93.53	698.0
XSECTION 49	REACH	.13	7	2	.05	.0	3.10	24.00	1.03	---	6.38	76.42	570.3
XSECTION 49	RUNOFF	.08	7	2	.05	.0	3.10	24.00	.88	---	6.15	55.18	664.8
XSECTION 49	ADDHYD	.22	7	2	.05	.0	3.10	24.00	.97	---	6.27	114.71	528.6

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 50	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.03	---	6.32	68.51	570.9	
XSECTION 51	REACH	.22	7	2	.05	.0	3.10	24.00	.97	---	6.40	107.87	497.1	
XSECTION 51	REACH	.12	7	2	.05	.0	3.10	24.00	1.02	---	6.49	61.29	510.8	
XSECTION 51	ADDHYD	.34	7	2	.05	.0	3.10	24.00	.99	---	6.43	167.42	496.8	
XSECTION 51	RUNOFF	.09	7	2	.05	.0	3.10	24.00	1.48	---	6.09	117.97	1255.0	
XSECTION 51	ADDHYD	.43	7	2	.05	.0	3.10	24.00	1.09	---	6.26	218.59	507.2	
XSECTION 52	REACH	.43	7	2	.05	.0	3.10	24.00	1.09	---	6.42	208.71	484.2	
XSECTION 52	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.98	---	6.19	94.85	682.4	
XSECTION 52	ADDHYD	.57	7	2	.05	.0	3.10	24.00	1.06	---	6.30	282.56	495.7	
XSECTION 52	ADDHYD	.86	7	2	.05	.0	3.10	24.00	1.02	---	6.24	447.55	518.6	
XSECTION 52	REACH	4.55	7	2	.05	.0	3.10	24.00	.84	---	6.85	1268.85	278.7	
XSECTION 52	ADDHYD	5.42	7	2	.05	.0	3.10	24.00	.87	---	6.78	1476.65	272.6	
XSECTION 53	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.87	---	6.18	87.98	619.6	
XSECTION 54	REACH	5.42	7	2	.05	.0	3.10	24.00	.86	---	6.92	1468.45	271.1	
XSECTION 54	REACH	.14	7	2	.05	.0	3.10	24.00	.87	---	6.18	87.98	619.6	
XSECTION 54	RUNOFF	.17	7	2	.05	.0	3.10	24.00	1.09	---	6.17	133.62	800.1	
XSECTION 54	ADDHYD	.31	7	2	.05	.0	3.10	24.00	.99	---	6.17	221.63	717.2	
XSECTION 54	ADDHYD	5.73	7	2	.05	.0	3.10	24.00	.87	---	6.90	1502.75	262.5	
XSECTION 55	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.78	---	6.21	149.22	1213.2	
XSECTION 55	ADDHYD	5.85	7	2	.05	.0	3.10	24.00	.89	---	6.88	1532.52	262.0	
XSECTION 56	REACH	5.85	7	2	.05	.0	3.10	24.00	.89	---	6.93	1531.66	261.9	
XSECTION 56	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.34	---	6.11	177.68	1117.5	
XSECTION 56	ADDHYD	6.01	7	2	.05	.0	3.10	24.00	.90	---	6.92	1548.29	257.7	
XSECTION 57	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.14	142.80	903.8	
XSECTION 58	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.09	---	6.10	99.51	938.8	
XSECTION 59	REACH	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.14	142.80	903.8	
XSECTION 59	REACH	.11	7	2	.05	.0	3.10	24.00	1.09	---	6.18	94.33	889.9	
XSECTION 59	ADDHYD	.26	7	2	.05	.0	3.10	24.00	1.13	---	6.16	235.45	891.9	
XSECTION 59	RUNOFF	.11	7	2	.05	.0	3.10	24.00	.93	---	6.09	94.61	829.9	
XSECTION 59	ADDHYD	.38	7	2	.05	.0	3.10	24.00	1.07	---	6.13	323.80	856.6	
XSECTION 60	REACH	.38	7	2	.05	.0	3.10	24.00	1.07	---	6.13	323.80	856.6	
XSECTION 60	RUNOFF	.12	7	2	.05	.0	3.10	24.00	.93	---	6.10	94.70	809.4	
XSECTION 60	ADDHYD	.50	7	2	.05	.0	3.10	24.00	1.03	---	6.12	416.74	841.9	
XSECTION 61	REACH	.50	7	2	.05	.0	3.10	24.00	1.03	---	6.12	416.74	841.9	
XSECTION 61	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.41	---	6.10	155.17	1193.6	
XSECTION 61	ADDHYD	.63	7	2	.05	.0	3.10	24.00	1.11	---	6.12	570.66	913.1	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 62	RUNOFF	.19	7	2	.05	.0	3.10	24.00	1.63	---	6.04	284.94	1600.8	
XSECTION 63	REACH	.18	7	2	.05	.0	3.10	24.00	1.63	---	6.04	284.94	1600.8	
XSECTION 63	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.78	---	6.09	196.27	1498.2	
XSECTION 63	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.69	---	6.05	476.45	1541.9	
XSECTION 63	ADDHYD	.93	7	2	.05	.0	3.10	24.00	1.30	---	6.09	1028.60	1101.3	
XSECTION 64	REACH	.93	7	2	.05	.0	3.10	24.00	1.30	---	6.14	1017.88	1089.8	
XSECTION 64	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.48	---	6.14	122.43	1155.0	
XSECTION 64	ADDHYD	1.04	7	2	.05	.0	3.10	24.00	1.32	---	6.14	1140.29	1096.4	
XSECTION 65	REACH	1.04	7	2	.05	.0	3.10	24.00	1.32	---	6.21	1119.75	1076.7	
XSECTION 65	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.98	---	6.10	80.85	860.1	
XSECTION 65	ADDHYD	1.13	7	2	.05	.0	3.10	24.00	1.29	---	6.20	1183.13	1043.3	
XSECTION 66	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.78	---	6.09	173.79	1498.2	
XSECTION 66	ADDHYD	1.25	7	2	.05	.0	3.10	24.00	1.34	---	6.19	1330.57	1064.5	
XSECTION 67	REACH	1.25	7	2	.05	.0	3.10	24.00	1.33	---	6.27	1286.30	1029.0	
XSECTION 67	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.04	---	6.12	138.65	845.4	
XSECTION 67	ADDHYD	1.41	7	2	.05	.0	3.10	24.00	1.30	---	6.26	1387.14	981.0	
XSECTION 68	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.95	---	6.03	200.78	1842.0	
XSECTION 68	ADDHYD	1.52	7	2	.05	.0	3.10	24.00	1.35	---	6.24	1468.51	964.2	
XSECTION 68	ADDHYD	7.53	7	2	.05	.0	3.10	24.00	.99	---	6.32	2536.28	336.8	
XSECTION 69	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.34	---	6.12	115.35	1088.2	
XSECTION 70	REACH	.11	7	2	.05	.0	3.10	24.00	1.34	---	6.21	109.09	1029.1	
XSECTION 70	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.10	161.87	993.0	
XSECTION 70	ADDHYD	.27	7	2	.05	.0	3.10	24.00	1.22	---	6.13	259.62	945.1	
XSECTION 71	REACH	.27	7	2	.05	.0	3.10	24.00	1.22	---	6.26	228.36	848.9	
XSECTION 71	RUNOFF	.15	7	2	.05	.0	3.10	24.00	1.78	---	6.14	201.29	1341.9	
XSECTION 71	ADDHYD	.42	7	2	.05	.0	3.10	24.00	1.42	---	6.21	415.15	990.8	
XSECTION 71	REACH	7.53	7	2	.05	.0	3.10	24.00	.99	---	6.32	2536.28	336.8	
XSECTION 71	ADDHYD	7.95	7	2	.05	.0	3.10	24.00	1.01	---	6.30	2913.99	366.6	
XSECTION 72	REACH	7.95	7	2	.05	.0	3.10	24.00	1.01	---	6.39	2855.11	359.2	
XSECTION 72	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.63	---	6.07	165.04	1447.7	
XSECTION 72	ADDHYD	8.06	7	2	.05	.0	3.10	24.00	1.02	---	6.38	2903.45	360.1	
XSECTION 73	RUNOFF	.15	7	2	.05	.0	3.10	24.00	2.04	---	6.03	286.84	1912.3	
XSECTION 74	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.55	---	6.06	154.51	1443.0	
XSECTION 74	ADDHYD	.26	7	2	.05	.0	3.10	24.00	1.83	---	6.04	450.06	1704.8	
XSECTION 74	REACH	8.06	7	2	.05	.0	3.10	24.00	1.02	---	6.46	2874.02	356.4	
XSECTION 74	ADDHYD	8.33	7	2	.05	.0	3.10	24.00	1.04	---	6.45	2945.09	353.7	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 75	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.21	---	6.11	113.43	1003.9	
XSECTION 76	RUNOFF	.09	7	2	.05	.0	3.10	24.00	1.34	---	6.14	90.46	1051.9	
XSECTION 76	ADDHYD	.20	7	2	.05	.0	3.10	24.00	1.27	---	6.12	203.33	1021.8	
XSECTION 76	REACH	8.33	7	2	.05	.0	3.10	24.00	1.04	---	6.53	2916.09	350.2	
XSECTION 76	ADDHYD	8.53	7	2	.05	.0	3.10	24.00	1.05	---	6.52	2973.07	348.7	
XSECTION 77	REACH	8.53	7	2	.05	.0	3.10	24.00	1.04	---	6.59	2954.35	346.5	
XSECTION 77	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.41	---	6.10	168.30	1193.6	
XSECTION 77	ADDHYD	8.67	7	2	.05	.0	3.10	24.00	1.05	---	6.59	2985.85	344.5	
XSECTION 78	REACH	8.67	7	2	.05	.0	3.10	24.00	1.05	---	6.70	2909.19	335.6	
XSECTION 78	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.40	---	6.20	130.70	961.0	
XSECTION 78	ADDHYD	9.80	7	2	.05	.0	3.10	24.00	1.05	---	6.70	2949.03	335.0	
ALTERNATE 1 STORM 2														
XSECTION 1	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.65	---	6.09	152.04	1490.6	
XSECTION 2	REACH	.10	7	2	.05	.0	4.50	24.00	1.65	---	6.09	152.04	1490.6	
XSECTION 2	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.94	---	6.08	165.95	1765.5	
XSECTION 2	ADDHYD	.20	7	2	.05	.0	4.50	24.00	1.79	---	6.08	317.92	1622.1	
XSECTION 3	REACH	.20	7	2	.05	.0	4.50	24.00	1.78	---	6.22	293.10	1495.4	
XSECTION 3	RUNOFF	.17	7	2	.05	.0	4.50	24.00	1.79	---	6.15	232.78	1377.4	
XSECTION 3	ADDHYD	.37	7	2	.05	.0	4.50	24.00	1.79	---	6.19	515.76	1413.1	
XSECTION 4	REACH	.37	7	2	.05	.0	4.50	24.00	1.79	---	6.19	515.76	1413.1	
XSECTION 4	RUNOFF	.18	7	2	.05	.0	4.50	24.00	1.79	---	6.12	264.11	1443.2	
XSECTION 4	ADDHYD	.55	7	2	.05	.0	4.50	24.00	1.79	---	6.17	765.94	1397.7	
XSECTION 5	REACH	.55	7	2	.05	.0	4.50	24.00	1.78	---	6.23	756.87	1381.2	
XSECTION 5	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.51	---	6.12	119.33	1230.2	
XSECTION 5	ADDHYD	.64	7	2	.05	.0	4.50	24.00	1.74	---	6.22	856.44	1327.8	
XSECTION 6	REACH	.64	7	2	.05	.0	4.50	24.00	1.74	---	6.27	854.33	1324.5	
XSECTION 6	RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.64	---	6.20	131.87	1136.8	
XSECTION 6	ADDHYD	.76	7	2	.05	.0	4.50	24.00	1.73	---	6.26	979.69	1287.4	
XSECTION 7	REACH	.76	7	2	.05	.0	4.50	24.00	1.72	---	6.33	968.54	1272.7	
XSECTION 7	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.88	---	6.05	244.96	2578.5	
XSECTION 7	ADDHYD	.86	7	2	.05	.0	4.50	24.00	1.85	---	6.30	1059.46	1237.7	
XSECTION 8	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.51	---	6.17	182.28	1822.8	
XSECTION 9	REACH	.10	7	2	.05	.0	4.50	24.00	2.50	---	6.29	168.12	1681.2	
XSECTION 9	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.25	---	6.21	221.75	1529.3	
XSECTION 9	ADDHYD	.25	7	2	.05	.0	4.50	24.00	2.35	---	6.24	384.66	1570.0	
XSECTION 10	REACH	.86	7	2	.05	.0	4.50	24.00	1.85	---	6.40	1019.44	1190.9	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 2													
XSECTION 10	REACH	.25	7	2	.05	.0	4.50	24.00	2.35	---	6.24	384.66	1570.0
XSECTION 10	ADDHYD	1.10	7	2	.05	.0	4.50	24.00	1.96	---	6.36	1354.89	1230.6
XSECTION 10	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.13	212.74	1477.4
XSECTION 10	ADDHYD	1.24	7	2	.05	.0	4.50	24.00	1.95	---	6.33	1479.00	1188.0
XSECTION 11	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.07	223.39	1667.1
XSECTION 12	REACH	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.13	222.66	1661.6
XSECTION 12	RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.87	---	6.08	137.32	1695.4
XSECTION 12	ADDHYD	.22	7	2	.05	.0	4.50	24.00	1.82	---	6.11	356.06	1656.1
XSECTION 13	REACH	.22	7	2	.05	.0	4.50	24.00	1.82	---	6.16	352.74	1640.7
XSECTION 13	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.86	---	6.11	202.97	1549.4
XSECTION 13	ADDHYD	.35	7	2	.05	.0	4.50	24.00	1.84	---	6.15	548.85	1586.3
XSECTION 14	RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.64	---	6.13	160.63	1316.6
XSECTION 15	REACH	.35	7	2	.05	.0	4.50	24.00	1.84	---	6.15	548.85	1586.3
XSECTION 15	REACH	.12	7	2	.05	.0	4.50	24.00	1.64	---	6.25	140.69	1153.2
XSECTION 15	ADDHYD	.47	7	2	.05	.0	4.50	24.00	1.78	---	6.16	675.24	1442.8
XSECTION 15	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.86	---	6.12	155.34	1508.1
XSECTION 15	ADDHYD	.57	7	2	.05	.0	4.50	24.00	1.80	---	6.15	827.30	1448.9
XSECTION 16	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.18	---	6.12	188.30	1743.5
XSECTION 17	REACH	.57	7	2	.05	.0	4.50	24.00	1.79	39.00	6.23	800.41	1401.8
XSECTION 17	REACH	.11	7	2	.05	.0	4.50	24.00	2.17	33.69	6.23	175.46	1624.7
XSECTION 17	ADDHYD	.68	7	2	.05	.0	4.50	24.00	1.85	40.69	6.23	975.83	1437.2
XSECTION 17	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.02	---	6.11	178.90	1641.3
XSECTION 17	ADDHYD	.79	7	2	.05	.0	4.50	24.00	1.88	41.13	6.21	1128.08	1431.6
XSECTION 17	ADDHYD	2.03	7	2	.05	.0	4.50	24.00	1.92	42.47	6.26	2532.57	1245.7
XSECTION 17	DIVERT	1.20	7	2	.05	.0	4.50	24.00	2.55	41.66	6.26	1460.23	1217.4
XSECTION 18	DIVERT	.83	7	2	.05	.0	4.50	24.00	1.01	41.66	6.26	1072.33	1286.5
XSECTION 18	REACH	.83	7	2	.05	.0	4.50	24.00	1.01	41.59	6.38	979.57	1175.2
XSECTION 18	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.71	---	6.38	132.00	880.0
XSECTION 18	ADDHYD	.98	7	2	.05	.0	4.50	24.00	1.12	41.69	6.38	1111.57	1130.2
XSECTION 19	RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.94	---	6.07	141.09	1808.9
XSECTION 20	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.72	---	6.12	206.92	1379.4
XSECTION 21	REACH	.15	7	2	.05	.0	4.50	24.00	1.71	---	6.20	200.50	1336.7
XSECTION 21	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.79	---	6.10	137.90	1549.4
XSECTION 21	ADDHYD	.24	7	2	.05	.0	4.50	24.00	1.74	---	6.15	324.10	1356.1
XSECTION 22	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.10	201.77	1505.7
XSECTION 23	REACH	.13	7	2	.05	.0	4.50	24.00	1.78	---	6.22	175.07	1306.5

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION	23	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.94	---	6.16	215.18	1453.9
XSECTION	23	ADDHYD	.28	7	2	.05	.0	4.50	24.00	1.86	---	6.19	384.34	1362.9
XSECTION	23	REACH	.08	7	2	.05	.0	4.50	24.00	1.94	---	6.13	139.11	1783.4
XSECTION	23	ADDHYD	.36	7	2	.05	.0	4.50	24.00	1.88	---	6.17	517.79	1438.3
XSECTION	23	ADDHYD	.60	7	2	.05	.0	4.50	24.00	1.83	---	6.16	841.37	1404.6
XSECTION	24	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.10	146.06	1505.7
XSECTION	25	REACH	.10	7	2	.05	.0	4.50	24.00	1.78	---	6.22	128.37	1323.4
XSECTION	25	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.94	---	6.11	179.44	1616.6
XSECTION	25	ADDHYD	.21	7	2	.05	.0	4.50	24.00	1.87	---	6.15	294.19	1414.4
XSECTION	26	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.10	153.58	1505.7
XSECTION	26	REACH	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.18	148.68	1457.6
XSECTION	27	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.79	---	6.10	167.34	1549.4
XSECTION	27	ADDHYD	.21	7	2	.05	.0	4.50	24.00	1.79	---	6.13	306.77	1460.8
XSECTION	27	REACH	.60	7	2	.05	.0	4.50	24.00	1.82	---	6.22	832.60	1390.0
XSECTION	27	ADDHYD	.81	7	2	.05	.0	4.50	24.00	1.81	---	6.20	1112.52	1375.2
XSECTION	28	REACH	.21	7	2	.05	.0	4.50	24.00	1.86	---	6.25	273.85	1316.6
XSECTION	28	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.18	---	6.06	208.93	2028.5
XSECTION	28	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.97	---	6.14	421.29	1354.6
XSECTION	28	REACH	.81	7	2	.05	.0	4.50	24.00	1.81	---	6.26	1097.94	1357.2
XSECTION	28	ADDHYD	1.12	7	2	.05	.0	4.50	24.00	1.85	---	6.24	1476.22	1318.1
XSECTION	29	RUNOFF	.16	7	2	.05	.0	4.50	24.00	1.87	---	6.10	245.29	1572.4
XSECTION	30	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.09	322.63	2068.1
XSECTION	31	REACH	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.14	322.44	2067.0
XSECTION	31	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.09	---	6.11	271.81	1709.5
XSECTION	31	ADDHYD	.31	7	2	.05	.0	4.50	24.00	2.26	---	6.13	592.69	1881.5
XSECTION	32	REACH	.31	7	2	.05	.0	4.50	24.00	2.26	---	6.13	592.69	1881.5
XSECTION	32	RUNOFF	.17	7	2	.05	.0	4.50	24.00	2.10	---	6.09	308.64	1826.3
XSECTION	32	ADDHYD	.48	7	2	.05	.0	4.50	24.00	2.20	---	6.11	896.12	1851.5
XSECTION	33	REACH	1.12	7	2	.05	.0	4.50	24.00	1.85	---	6.33	1427.24	1274.3
XSECTION	33	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.69	---	6.07	365.17	2340.8
XSECTION	33	ADDHYD	1.28	7	2	.05	.0	4.50	24.00	1.95	---	6.29	1593.99	1249.2
XSECTION	33	REACH	.16	7	2	.05	.0	4.50	24.00	1.86	---	6.17	241.71	1549.4
XSECTION	33	REACH	.48	7	2	.05	.0	4.50	24.00	2.20	---	6.16	893.03	1845.1
XSECTION	33	ADDHYD	1.43	7	2	.05	.0	4.50	24.00	1.94	---	6.27	1793.29	1252.3
XSECTION	33	ADDHYD	1.92	7	2	.05	.0	4.50	24.00	2.01	---	6.22	2620.09	1367.5
STRUCTURE	33	RESVOR	1.92	7	2	.05	.0	4.50	24.00	2.00	6118.07	6.34	2347.33	1225.1

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 34	REACH	1.92	7	2	.05	.0	4.50	24.00	1.99	---	6.42	2255.05	1177.0	
XSECTION 34	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.17	180.15	1305.4	
XSECTION 34	ADDHYD	2.05	7	2	.05	.0	4.50	24.00	1.98	---	6.41	2356.82	1147.4	
XSECTION 34	ADDHYD	3.04	7	2	.05	.0	4.50	24.00	1.70	---	6.41	3459.19	1138.8	
XSECTION 35	REACH	3.04	7	2	.05	.0	4.50	24.00	1.70	---	6.41	3459.19	1138.8	
XSECTION 35	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.14	202.54	1457.1	
XSECTION 35	ADDHYD	3.18	7	2	.05	.0	4.50	24.00	1.71	---	6.40	3555.84	1119.4	
XSECTION 36	REACH	3.18	7	2	.05	.0	4.50	24.00	1.71	---	6.40	3555.84	1119.4	
XSECTION 36	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.26	---	6.14	216.15	1771.7	
XSECTION 36	ADDHYD	3.30	7	2	.05	.0	4.50	24.00	1.73	---	6.40	3664.23	1110.9	
XSECTION 37	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.02	---	6.10	218.76	1709.0	
XSECTION 38	RUNOFF	.19	7	2	.05	.0	4.50	24.00	1.86	---	6.29	206.02	1107.7	
XSECTION 39	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.93	---	6.21	199.94	1315.4	
XSECTION 40	REACH	.15	7	2	.05	.0	4.50	24.00	1.93	---	6.32	187.31	1232.3	
XSECTION 40	RUNOFF	.17	7	2	.05	.0	4.50	24.00	1.72	---	6.11	243.96	1418.4	
XSECTION 40	ADDHYD	.32	7	2	.05	.0	4.50	24.00	1.82	---	6.17	383.64	1184.1	
XSECTION 40	REACH	3.30	7	2	.05	.0	4.50	24.00	1.72	---	6.50	3463.51	1050.0	
XSECTION 40	REACH	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.18	209.26	1634.8	
XSECTION 40	REACH	.19	7	2	.05	.0	4.50	24.00	1.85	---	6.35	204.40	1098.9	
XSECTION 40	ADDHYD	.45	7	2	.05	.0	4.50	24.00	1.87	---	6.17	592.68	1311.2	
XSECTION 40	ADDHYD	.64	7	2	.05	.0	4.50	24.00	1.87	---	6.21	756.46	1185.7	
XSECTION 40	ADDHYD	3.94	7	2	.05	.0	4.50	24.00	1.75	---	6.48	3942.23	1001.4	
XSECTION 41	REACH	3.94	7	2	.05	.0	4.50	24.00	1.74	---	6.56	3893.00	986.4	
XSECTION 41	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.94	---	6.18	215.21	1406.6	
XSECTION 41	ADDHYD	4.09	7	2	.05	.0	4.50	24.00	1.75	---	6.56	3962.51	968.9	
XSECTION 42	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.26	162.85	1154.9	
XSECTION 43	REACH	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.26	162.85	1154.9	
XSECTION 43	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.93	---	6.32	142.52	1088.0	
XSECTION 43	ADDHYD	.27	7	2	.05	.0	4.50	24.00	1.89	---	6.29	302.91	1113.6	
XSECTION 44	REACH	.27	7	2	.05	.0	4.50	24.00	1.89	---	6.35	301.47	1108.3	
XSECTION 44	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.79	---	6.11	136.46	1483.3	
XSECTION 44	ADDHYD	.36	7	2	.05	.0	4.50	24.00	1.86	---	6.27	381.00	1046.7	
XSECTION 45	REACH	.36	7	2	.05	.0	4.50	24.00	1.86	---	6.33	379.60	1042.8	
XSECTION 45	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.02	---	6.11	164.13	1641.3	
XSECTION 45	ADDHYD	.46	7	2	.05	.0	4.50	24.00	1.90	---	6.24	493.97	1064.6	
XSECTION 45	ADDHYD	4.55	7	2	.05	.0	4.50	24.00	1.77	---	6.54	4304.92	945.4	

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 (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
 A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 46	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.94	---	6.14	209.98	1521.6	
XSECTION 47	REACH	.14	7	2	.05	.0	4.50	24.00	1.93	---	6.26	185.27	1342.6	
XSECTION 47	RUNOFF	.16	7	2	.05	.0	4.50	24.00	1.79	---	6.11	229.91	1493.3	
XSECTION 47	ADDHYD	.29	7	2	.05	.0	4.50	24.00	1.86	---	6.16	386.35	1318.6	
XSECTION 48	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.19	189.59	1414.9	
XSECTION 49	REACH	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.34	163.36	1219.1	
XSECTION 49	RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.79	---	6.14	117.32	1413.5	
XSECTION 49	ADDHYD	.22	7	2	.05	.0	4.50	24.00	1.92	---	6.24	250.80	1155.7	
XSECTION 50	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.01	---	6.30	140.47	1170.6	
XSECTION 51	REACH	.22	7	2	.05	.0	4.50	24.00	1.92	---	6.35	240.17	1106.8	
XSECTION 51	REACH	.12	7	2	.05	.0	4.50	24.00	2.00	---	6.44	129.54	1079.5	
XSECTION 51	ADDHYD	.34	7	2	.05	.0	4.50	24.00	1.95	---	6.38	365.04	1083.2	
XSECTION 51	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.60	---	6.08	208.46	2217.7	
XSECTION 51	ADDHYD	.43	7	2	.05	.0	4.50	24.00	2.09	---	6.25	467.68	1085.1	
XSECTION 52	REACH	.43	7	2	.05	.0	4.50	24.00	2.09	---	6.38	450.99	1046.4	
XSECTION 52	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.94	---	6.18	195.51	1406.6	
XSECTION 52	ADDHYD	.57	7	2	.05	.0	4.50	24.00	2.05	---	6.29	606.55	1064.1	
XSECTION 52	ADDHYD	.86	7	2	.05	.0	4.50	24.00	1.98	---	6.22	963.76	1116.8	
XSECTION 52	REACH	4.55	7	2	.05	.0	4.50	24.00	1.76	---	6.60	4286.47	941.4	
XSECTION 52	ADDHYD	5.42	7	2	.05	.0	4.50	24.00	1.80	---	6.58	4877.10	900.4	
XSECTION 53	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.16	188.83	1329.8	
XSECTION 54	REACH	5.42	7	2	.05	.0	4.50	24.00	1.80	---	6.66	4823.26	890.5	
XSECTION 54	REACH	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.16	188.83	1329.8	
XSECTION 54	RUNOFF	.17	7	2	.05	.0	4.50	24.00	2.09	---	6.15	264.31	1582.7	
XSECTION 54	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.95	---	6.16	453.02	1466.1	
XSECTION 54	ADDHYD	5.73	7	2	.05	.0	4.50	24.00	1.80	---	6.65	4934.99	861.9	
XSECTION 55	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.97	---	6.19	252.01	2049.9	
XSECTION 55	ADDHYD	5.85	7	2	.05	.0	4.50	24.00	1.83	---	6.65	5021.54	858.6	
XSECTION 56	REACH	5.85	7	2	.05	.0	4.50	24.00	1.83	---	6.70	5016.38	857.7	
XSECTION 56	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.09	324.65	2041.2	
XSECTION 56	ADDHYD	6.01	7	2	.05	.0	4.50	24.00	1.84	---	6.70	5061.11	842.5	
XSECTION 57	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.12	275.48	1743.5	
XSECTION 58	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.10	---	6.09	193.59	1826.3	
XSECTION 59	REACH	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.12	275.48	1743.5	
XSECTION 59	REACH	.11	7	2	.05	.0	4.50	24.00	2.09	---	6.16	187.39	1767.2	
XSECTION 59	ADDHYD	.26	7	2	.05	.0	4.50	24.00	2.14	---	6.14	460.94	1746.0	

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SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 59	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.87	---	6.08	193.27	1695.4	
XSECTION 59	ADDHYD	.38	7	2	.05	.0	4.50	24.00	2.06	---	6.12	644.88	1706.0	
XSECTION 60	REACH	.38	7	2	.05	.0	4.50	24.00	2.06	---	6.12	644.88	1706.0	
XSECTION 60	RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.87	---	6.08	194.27	1660.4	
XSECTION 60	ADDHYD	.50	7	2	.05	.0	4.50	24.00	2.01	---	6.11	836.31	1689.5	
XSECTION 61	REACH	.50	7	2	.05	.0	4.50	24.00	2.01	---	6.11	836.31	1689.5	
XSECTION 61	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.52	---	6.09	278.54	2142.6	
XSECTION 61	ADDHYD	.63	7	2	.05	.0	4.50	24.00	2.12	---	6.10	1113.33	1781.3	
XSECTION 62	RUNOFF	.18	7	2	.05	.0	4.50	24.00	2.79	---	6.03	479.28	2692.6	
XSECTION 63	REACH	.18	7	2	.05	.0	4.50	24.00	2.79	---	6.03	479.28	2692.6	
XSECTION 63	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.98	---	6.08	326.69	2493.8	
XSECTION 63	ADDHYD	.31	7	2	.05	.0	4.50	24.00	2.87	---	6.04	799.70	2588.0	
XSECTION 63	ADDHYD	.93	7	2	.05	.0	4.50	24.00	2.37	---	6.08	1887.14	2020.5	
XSECTION 64	REACH	.93	7	2	.05	.0	4.50	24.00	2.36	---	6.13	1878.67	2011.4	
XSECTION 64	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.60	---	6.13	217.95	2056.2	
XSECTION 64	ADDHYD	1.04	7	2	.05	.0	4.50	24.00	2.39	---	6.13	2096.61	2016.0	
XSECTION 65	REACH	1.04	7	2	.05	.0	4.50	24.00	2.39	---	6.19	2076.26	1996.4	
XSECTION 65	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.94	---	6.08	162.63	1730.1	
XSECTION 65	ADDHYD	1.13	7	2	.05	.0	4.50	24.00	2.35	---	6.18	2208.32	1917.4	
XSECTION 66	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.98	---	6.08	289.28	2493.8	
XSECTION 66	ADDHYD	1.25	7	2	.05	.0	4.50	24.00	2.41	---	6.17	2458.57	1966.9	
XSECTION 67	REACH	1.25	7	2	.05	.0	4.50	24.00	2.40	---	6.24	2416.33	1933.1	
XSECTION 67	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.02	---	6.10	276.33	1684.9	
XSECTION 67	ADDHYD	1.41	7	2	.05	.0	4.50	24.00	2.36	---	6.23	2630.16	1860.1	
XSECTION 68	RUNOFF	.11	7	2	.05	.0	4.50	24.00	3.18	---	6.03	320.32	2938.7	
XSECTION 68	ADDHYD	1.52	7	2	.05	.0	4.50	24.00	2.42	---	6.21	2783.62	1927.7	
XSECTION 68	ADDHYD	7.53	7	2	.05	.0	4.50	24.00	1.96	---	6.31	6020.70	799.5	
XSECTION 69	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.43	---	6.10	211.28	1993.2	
XSECTION 70	REACH	.11	7	2	.05	.0	4.50	24.00	2.42	---	6.18	204.41	1928.4	
XSECTION 70	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.09	309.37	1898.0	
XSECTION 70	ADDHYD	.27	7	2	.05	.0	4.50	24.00	2.27	---	6.11	198.36	1852.6	
XSECTION 71	REACH	.27	7	2	.05	.0	4.50	24.00	2.27	---	6.23	454.59	1689.9	
XSECTION 71	RUNOFF	.15	7	2	.05	.0	4.50	24.00	2.97	---	6.13	337.87	2252.5	
XSECTION 71	ADDHYD	.42	7	2	.05	.0	4.50	24.00	2.52	---	6.19	775.23	1850.2	
XSECTION 71	REACH	7.53	7	2	.05	.0	4.50	24.00	1.96	---	6.31	6020.70	799.5	
XSECTION 71	ADDHYD	7.95	7	2	.05	.0	4.50	24.00	1.99	---	6.29	6703.97	843.3	

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SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	1	STORM	2										
XSECTION 72	REACH	7.95	7	2	.05	.0	4.50	24.00	1.99	---	6.37	6639.86	835.3
XSECTION 72	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.79	---	6.06	281.48	2469.1
XSECTION 72	ADDHYD	8.06	7	2	.05	.0	4.50	24.00	2.00	---	6.36	6725.83	834.1
XSECTION 73	RUNOFF	.15	7	2	.05	.0	4.50	24.00	3.28	---	6.03	451.45	3009.7
XSECTION 74	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.70	---	6.05	283.41	2486.0
XSECTION 74	ADDHYD	.26	7	2	.05	.0	4.50	24.00	3.03	---	6.03	733.54	2778.5
XSECTION 74	REACH	8.06	7	2	.05	.0	4.50	24.00	1.99	---	6.42	6694.06	830.2
XSECTION 74	ADDHYD	8.33	7	2	.05	.0	4.50	24.00	2.03	---	6.42	6818.25	818.8
XSECTION 75	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.26	---	6.10	214.26	1896.1
XSECTION 76	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.43	---	6.12	166.10	1931.4
XSECTION 76	ADDHYD	.20	7	2	.05	.0	4.50	24.00	2.33	---	6.11	379.56	1907.4
XSECTION 76	REACH	8.33	7	2	.05	.0	4.50	24.00	2.02	---	6.48	6781.94	814.4
XSECTION 76	ADDHYD	8.53	7	2	.05	.0	4.50	24.00	2.03	---	6.48	6894.00	808.5
XSECTION 77	REACH	8.53	7	2	.05	.0	4.50	24.00	2.03	---	6.54	6876.61	806.5
XSECTION 77	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.52	---	6.09	302.10	2142.6
XSECTION 77	ADDHYD	8.67	7	2	.05	.0	4.50	24.00	2.04	---	6.54	6937.83	800.4
XSECTION 78	REACH	8.67	7	2	.05	.0	4.50	24.00	2.03	---	6.63	6823.60	787.3
XSECTION 78	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.51	---	6.19	238.76	1755.6
XSECTION 78	ADDHYD	8.80	7	2	.05	.0	4.50	24.00	2.04	---	6.62	6910.27	784.9

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS

(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS. SEE PREVIOUS WARNINGS)

HYDROGRAPH INFORMATION										ROUTING PARAMETERS					PEAK			
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA		BASE-	VOLUME	MAIN	ITER-	Q AND A		LENGTH	PEAK	S/O	ATT-	TRAVEL
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	@PEAK	KIN	STOR-	TIME
(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(CFS)	(IN)	(HR)	#	COEFF	POWER	FACTOR	O/I	(K)	COEFF	AGE
												(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)
ALTERNATE	1	STORM	1															
2	500	70	6.1	70	6.1	152	6.1	0	.78	.05	0	.920	1.51	.010	1.000	83	1.007	.00
3	2300	152	6.1	132	6.2	240	6.2	0	.98	.05	1	.710	1.49	.099	.869	372	.39	.10
4	550	240	6.2	240	6.2	360	6.2	0	.87	.05	0	1.70	1.46	.004	1.000	47	1.007	.00
5	1800	360	6.2	351	6.3	393	6.3	0	.87	.05	1	1.05	1.47	.027	.977	180	.67	.10
6	1400	393	6.3	390	6.3	444	6.3	0	.84	.05	1	.150	1.63	.013	.993	139	.787	.05
7	1500	444	6.3	435	6.3	481	6.3	0	.83	.05	1	1.59	1.33	.029	.979	175	.687	.05
9	2400	100	6.2	89	6.3	201	6.3	0	1.41	.05	1	1.43	1.33	.101	.896	440	.34	.10
10	3250	481	6.3	455	6.5	---	---	0	.93	.05	1	1.82	1.33	.057	.946	336	.42	.10
10	1450	201	6.3	201	6.3	---	---	0	1.29	.05	0	4.35	1.44	.006	1.000	72	1.007	.00
12	1150	107	6.1	106	6.2	168	6.1	0	.88	.05	1	2.62	1.33	.028	.990	131	.817	.05
13	3550	168	6.1	167	6.2	258	6.2	0	.90	.05	1	6.75	1.40	.029	.989	150	.757	.10
15	900	258	6.2	258	6.2	---	---	0	.91	.05	0	6.04	1.42	.003	1.000	35	1.007	.00
15	3700	72	6.2	59	6.3	---	---	0	.78	.05	1	2.26	1.33	.140	.819	521	.29	.15
17	2300	380	6.2	363	6.3	---	---	0	.88	.05	1	1.89	1.33	.051	.954	245	.54	.10
17	2700	97	6.2	87	6.3	---	---	0	1.15	.05	1	.950	1.51	.088	.893	394	.37	.10
18	3850	241	6.3	191	6.5	249	6.4	0	.21	.05	1	.800	1.46	.352	.791	564	.28	.15
21	2300	95	6.2	90	6.3	146	6.2	0	.83	.05	1	3.07	1.33	.050	.941	240	.55	.10
23	3100	95	6.1	78	6.3	178	6.2	0	.88	.05	1	1.59	1.33	.155	.818	532	.29	.15
23	3700	70	6.1	69	6.2	---	---	0	.98	.05	1	9.64	1.34	.041	.977	173	.687	.05
25	2350	69	6.1	57	6.3	137	6.2	0	.88	.05	1	1.33	1.33	.142	.833	499	.31	.15
26	1800	72	6.1	69	6.2	---	---	0	.88	.05	1	2.52	1.33	.052	.954	234	.56	.10
27	1750	388	6.2	381	6.3	503	6.3	0	.90	.05	1	.750	1.53	.022	.981	175	.687	.05
28	3400	137	6.2	123	6.3	196	6.2	0	.93	.05	1	2.47	1.33	.083	.899	382	.38	.15
28	2250	503	6.3	495	6.3	---	---	0	.89	.05	1	2.52	1.33	.030	.984	180	.67	.05
31	2000	177	6.1	176	6.2	313	6.2	0	1.34	.05	1	4.55	1.40	.018	.995	110	.907	.05
32	1700	313	6.2	313	6.2	465	6.2	0	1.21	.05	0	3.18	1.46	.011	1.000	86	1.007	.00
33	2900	661	6.3	630	6.4	708	6.3	0	.92	.05	1	1.75	1.33	.050	.953	286	.48	.10
33	1200	118	6.1	115	6.2	---	---	0	.93	.05	1	.880	1.49	.030	.973	183	.66	.10
33	1300	465	6.2	463	6.2	---	---	0	1.17	.05	1	.980	1.46	.019	.996	130	.827	.05
34	2450	842	6.5	803	6.6	831	6.6	0	1.03	.05	1	.670	1.44	.024	.953	287	.48	.10
35	1250	1047	6.6	1047	6.6	1078	6.6	0	.78	.05	0	2.47	1.51	.001	1.000	43	1.007	.00
36	700	1078	6.6	1072	6.6	1103	6.6	0	.79	.05	1	.210	1.52	.006	.995	118	.877	.05

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS

(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS. SEE PREVIOUS WARNINGS)

HYDROGRAPH INFORMATION										ROUTING PARAMETERS							PEAK		
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	Q AND A		PEAK RATIO D/I	S/Q #PEAK (K)	ATT- KIN COEFF (C)	TRAVEL TIME		
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)					EQUATION COEFF	LENGTH POWER FACTOR				STOR- AGE (HR)	KINE- MATIC (HR)	
ALTERNATE		1	STORM	1															
40	1800	96	6.3	88	6.3	173	6.2	0	.98	.05	1	1.13	1.33	.078	.915	398	.37	.10	.11
40	2650	1103	6.6	1032	6.8	---	---	0	.81	.05	1	.210	1.52	.040	.936	443	.34	.15	.12
40	1050	110	6.1	101	6.2	---	---	0	1.04	.05	1	.220	1.59	.059	.923	299	.46	.10	.08
40	650	97	6.3	95	6.4	---	---	0	.92	.05	1	.220	1.59	.016	.982	194	.63	.10	.05
41	1700	1169	6.7	1148	6.8	1171	6.8	0	.82	.05	1	.200	1.52	.017	.981	288	.48	.10	.08
43	500	76	6.3	76	6.3	143	6.3	0	.92	.05	0	1.27	1.42	.002	1.000	35	1.00?	.00	.00
44	2750	143	6.3	141	6.4	176	6.3	0	.95	.05	1	3.97	1.44	.016	.987	161	.72?	.10	.04
45	2800	176	6.3	174	6.3	226	6.3	0	.93	.05	1	3.97	1.44	.013	.991	154	.74?	.05	.04
47	4050	103	6.2	86	6.3	177	6.2	0	.98	.05	1	2.26	1.33	.139	.836	523	.29	.15	.15
49	3600	93	6.2	76	6.4	114	6.3	0	1.03	.05	1	1.51	1.33	.157	.816	644	.25	.20	.18
51	2100	114	6.3	108	6.4	---	---	0	.97	.05	1	1.51	1.33	.054	.942	357	.40	.15	.10
51	2600	68	6.3	61	6.5	---	---	0	1.03	.05	1	1.43	1.33	.092	.897	524	.29	.20	.15
52	2700	219	6.3	208	6.4	283	6.3	0	1.09	.05	1	1.51	1.33	.049	.954	391	.37	.15	.11
52	1250	1274	6.8	1269	6.8	---	---	0	.84	.05	1	.210	1.52	.008	.996	199	.62	.05	.06
54	1800	1476	6.8	1468	6.9	---	---	0	.87	.05	1	.190	1.52	.014	.995	291	.47	.05	.08
54	650	88	6.2	88	6.2	220	6.2	0	.87	.05	0	3.19	1.33	.008	1.000	67	1.00?	.00	.00
56	1900	1532	6.9	1531	7.0	1548	6.9	0	.89	.05	1	.480	1.53	.005	1.000	158	.73?	.05	.04
59	1350	143	6.2	143	6.2	---	---	0	1.15	.05	0	5.05	1.42	.008	1.000	70	1.00?	.00	.00
59	1900	100	6.1	94	6.2	---	---	0	1.09	.05	1	2.42	1.33	.057	.944	235	.55	.10	.07
60	1200	323	6.2	323	6.2	413	6.1	0	1.07	.05	0	3.31	1.42	.008	1.000	66	1.00?	.00	.00
61	1800	413	6.1	413	6.1	568	6.1	0	1.03	.05	0	4.35	1.44	.008	1.000	71	1.00?	.00	.00
63	1400	284	6.1	284	6.1	476	6.1	0	1.63	.05	0	6.43	1.40	.008	1.000	53	1.00?	.00	.00
64	1250	1025	6.1	1017	6.2	1140	6.2	0	1.30	.05	1	1.43	1.33	.025	.993	129	.82?	.05	.04
65	1600	1140	6.2	1118	6.2	1183	6.2	0	1.32	.05	1	1.51	1.33	.031	.981	154	.74?	.05	.04
67	4300	1329	6.2	1281	6.3	1386	6.3	0	1.34	.05	1	1.29	1.51	.036	.964	212	.60	.05	.06
70	1500	115	6.1	109	6.2	258	6.2	0	1.34	.05	1	.670	1.50	.053	.948	269	.50	.10	.08
71	2950	258	6.2	228	6.3	415	6.2	0	1.22	.05	1	1.42	1.33	.112	.883	429	.35	.10	.12
71	650	2532	6.3	2532	6.3	---	---	0	.99	.05	0	.790	1.33	.004	1.000	83	1.00?	.00	.00
72	1300	2914	6.3	2852	6.4	2897	6.4	0	1.01	.05	1	.140	1.50	.012	.979	225	.57	.10	.06
74	1500	2897	6.4	2873	6.5	---	---	0	1.02	.05	1	.220	1.51	.008	.992	183	.66	.05	.05
76	1450	2945	6.5	2909	6.6	---	---	0	1.04	.05	1	.200	1.51	.008	.988	188	.65	.10	.05
77	1050	2969	6.5	2953	6.6	2984	6.6	0	1.05	.05	1	.160	1.50	.007	.995	165	.71?	.10	.05

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS

(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS. SEE PREVIOUS WARNINGS)

HYDROGRAPH INFORMATION										ROUTING PARAMETERS						PEAK			
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	G AND A			PEAK RATIO D/I	S/O @PEAK (K)	ATT- KIN COEFF (C)	TRAVEL STOR- AGE (HR)	TIME KINE- MATIC (HR)
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)					EQUATION COEFF	POWER (X)	LENGTH FACTOR (X1)					
ALTERNATE		1	STORM	1															
78	2450	2984	6.6	2909	6.7	2949	6.7	0	1.05	.05	1	.190	1.51	.018	.975	327	.63	.10	.09
ALTERNATE		1	STORM	2															
2	500	151	6.1	151	6.1	316	6.1	0	1.65	.05	0	.920	1.51	.007	1.000	64	1.007	.00	.00
3	2300	316	6.1	291	6.2	516	6.2	0	1.79	.05	1	.710	1.49	.071	.921	293	.47	.05	.08
4	550	516	6.2	516	6.2	762	6.2	0	1.79	.05	0	1.70	1.46	.003	1.000	37	1.007	.00	.00
5	1800	762	6.2	754	6.3	853	6.2	0	1.79	.05	1	1.05	1.47	.020	.989	142	.787	.10	.04
6	1400	853	6.2	850	6.3	978	6.3	0	1.74	.05	1	.150	1.63	.009	.996	103	.937	.05	.03
7	1500	978	6.3	963	6.3	1059	6.3	0	1.73	.05	1	1.59	1.33	.024	.985	144	.777	.10	.04
9	2400	182	6.2	168	6.3	385	6.3	0	2.51	.05	1	1.13	1.33	.085	.925	379	.38	.15	.11
10	3250	1059	6.3	1019	6.4	---	---	0	1.85	.05	1	1.82	1.33	.050	.962	277	.49	.10	.08
10	1450	385	6.3	385	6.3	---	---	0	2.35	.05	0	4.35	1.44	.005	1.000	59	1.007	.00	.00
12	1150	222	6.1	220	6.2	356	6.1	0	1.79	.05	1	2.62	1.33	.023	.993	110	.907	.10	.03
13	3550	356	6.1	351	6.2	549	6.2	0	1.82	.05	1	6.75	1.40	.022	.988	121	.857	.05	.03
15	900	549	6.2	549	6.2	---	---	0	1.84	.05	0	6.04	1.42	.002	1.000	28	1.007	.00	.00
15	3700	159	6.2	141	6.3	---	---	0	1.64	.05	1	2.26	1.33	.113	.884	428	.35	.10	.12
17	2300	827	6.2	796	6.3	---	---	0	1.80	.05	1	1.89	1.33	.043	.963	202	.62	.10	.06
17	2700	187	6.1	174	6.3	---	---	0	2.18	.05	1	.950	1.51	.065	.933	316	.44	.15	.09
18	3850	1071	6.3	976	6.4	1107	6.4	0	1.01	.05	1	.800	1.45	.159	.911	355	.40	.15	.10
21	2300	205	6.1	201	6.2	324	6.2	0	1.72	.05	1	3.07	1.33	.041	.977	199	.62	.10	.06
23	3100	202	6.1	174	6.2	384	6.2	0	1.79	.05	1	1.59	1.33	.127	.861	441	.34	.10	.12
23	3700	140	6.1	138	6.2	---	---	0	1.94	.05	1	9.64	1.34	.033	.983	145	.777	.10	.04
25	2350	146	6.1	128	6.2	294	6.2	0	1.79	.05	1	1.33	1.33	.117	.874	614	.36	.10	.12
26	1800	154	6.1	148	6.2	---	---	0	1.79	.05	1	2.52	1.33	.043	.962	194	.63	.10	.05
27	1750	840	6.2	827	6.2	1112	6.2	0	1.83	.05	1	.750	1.53	.016	.985	134	.807	.05	.04
28	3400	294	6.2	274	6.3	421	6.2	0	1.87	.05	1	2.47	1.33	.071	.931	316	.44	.10	.09
28	2250	1112	6.2	1096	6.3	---	---	0	1.81	.05	1	2.52	1.33	.026	.985	148	.767	.05	.04
31	2000	322	6.1	322	6.2	588	6.2	0	2.43	.05	1	4.55	1.40	.014	1.000	93	.987	.05	.03
32	1700	588	6.2	588	6.2	895	6.1	0	2.26	.05	0	3.18	1.46	.008	1.000	71	1.007	.00	.00
33	2900	1475	6.3	1421	6.3	1593	6.3	0	1.95	.05	1	1.75	1.33	.044	.963	234	.56	.10	.07
33	1200	245	6.1	241	6.2	---	---	0	1.87	.05	1	.880	1.49	.022	.982	144	.777	.05	.04
33	1300	895	6.1	890	6.2	---	---	0	2.20	.05	1	.980	1.46	.015	.995	106	.927	.05	.03
34	2450	2345	6.3	2242	6.4	2350	6.4	0	2.00	.05	1	.670	1.44	.026	.956	210	.60	.05	.06

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

HYDROGRAPH INFORMATION									ROUTING PARAMETERS					PEAK				
XSEC	REACH	INFLOW		OUTFLOW		OUTFLOW+		BASE-	VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL	TIME
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	#PEAK	KIN	STOR-	KINE-
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)	#	COEFF	POWER	FACTOR	(Q*)	(SEC)	(C)	(HR)
ALTERNATE	1	STORM	2															
35	1250	3457	6.4	3457	6.4	3556	6.4	0	1.70	.05	0	2.47	1.51	.001	1.000	29	1.00?	.00
36	700	3556	6.4	3556	6.4	3664	6.4	0	1.71	.05	0	.210	1.52	.006	1.000	78	1.00?	.00
40	1800	200	6.2	187	6.3	382	6.2	0	1.93	.05	1	1.13	1.33	.066	.935	332	.43	.10
40	2650	3664	6.4	3463	6.5	---	---	0	1.73	.05	1	.210	1.52	.042	.945	294	.47	.10
40	1050	219	6.1	208	6.2	---	---	0	2.02	.05	1	.220	1.59	.041	.952	232	.56	.10
40	650	206	6.3	204	6.3	---	---	0	1.86	.05	1	.220	1.59	.011	.993	147	.76?	.05
41	1700	3932	6.5	3880	6.6	3962	6.6	0	1.75	.05	1	.200	1.52	.018	.987	190	.64	.05
43	500	163	6.3	163	6.3	303	6.3	0	1.86	.05	0	1.27	1.42	.002	1.000	28	1.00?	.00
44	2750	303	6.3	301	6.3	380	6.3	0	1.89	.05	1	3.97	1.44	.012	.996	128	.83?	.05
45	2800	380	6.3	378	6.3	494	6.3	0	1.86	.05	1	3.97	1.44	.010	.995	122	.85?	.10
47	4050	209	6.2	185	6.3	386	6.2	0	1.94	.05	1	2.26	1.33	.115	.883	438	.34	.10
49	3600	189	6.2	163	6.3	251	6.3	0	2.01	.05	1	1.51	1.33	.131	.862	540	.29	.15
51	2100	251	6.3	240	6.3	---	---	0	1.92	.05	1	1.51	1.33	.047	.959	294	.47	.10
51	2600	140	6.3	130	6.5	---	---	0	2.01	.05	1	1.43	1.33	.078	.922	438	.34	.15
52	2700	468	6.3	450	6.4	606	6.3	0	2.09	.05	1	1.51	1.33	.044	.963	324	.43	.15
52	1250	4304	6.6	4286	6.6	---	---	0	1.77	.05	1	.210	1.52	.009	.996	131	.81?	.05
54	1800	4871	6.6	4820	6.7	---	---	0	1.80	.05	1	.190	1.52	.015	.990	193	.64	.05
54	650	189	6.2	189	6.2	453	6.2	0	1.79	.05	0	3.19	1.33	.007	1.000	56	1.00?	.00
56	1900	5022	6.7	5016	6.7	5061	6.7	0	1.83	.05	1	.180	1.53	.005	.999	105	.92?	.05
59	1350	273	6.1	273	6.1	---	---	0	2.18	.05	0	5.05	1.42	.006	1.000	58	1.00?	.00
59	1900	193	6.1	187	6.2	---	---	0	2.10	.05	1	2.42	1.33	.046	.969	199	.62	.05
60	1200	642	6.1	642	6.1	836	6.1	0	2.06	.05	0	3.31	1.42	.006	1.000	54	1.00?	.00
61	1800	836	6.1	836	6.1	1113	6.1	0	2.01	.05	0	4.35	1.44	.006	1.000	58	1.00?	.00
63	1400	475	6.1	475	6.1	799	6.1	0	2.79	.05	0	6.43	1.40	.006	1.000	45	1.00?	.00
64	1250	1870	6.1	1867	6.2	2084	6.2	0	2.37	.05	1	1.43	1.33	.020	.999	111	.90?	.05
65	1600	2084	6.2	2073	6.2	2198	6.2	0	2.39	.05	1	1.51	1.33	.026	.995	132	.81?	.05
67	4300	2445	6.2	2414	6.3	2616	6.3	0	2.41	.05	1	1.29	1.51	.027	.987	173	.69?	.10
70	1500	211	6.1	204	6.2	497	6.1	0	2.43	.05	1	.670	1.50	.040	.964	219	.58	.10
71	2950	497	6.1	452	6.3	774	6.2	0	2.27	.05	1	1.42	1.33	.095	.909	365	.40	.15
71	650	6015	6.3	6015	6.3	---	---	0	1.96	.05	0	.790	1.33	.004	1.000	67	1.00?	.00
72	1300	6702	6.3	6629	6.3	6721	6.3	0	1.99	.05	1	.140	1.50	.010	.989	170	.69?	.05
74	1500	6721	6.3	6671	6.4	---	---	0	2.00	.05	1	.220	1.51	.007	.993	138	.79?	.05

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS								PEAK			
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION %	Q AND A		PEAK RATIO D/I	S/Q @PEAK (K)	ATT- KIN COEFF (C)	PEAK TRAVEL TIME				
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME					EQUATION	LENGTH				COEFF	POWER	FACTOR	STOR- AGE (HR)	KINE- MATIC (HR)
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)		(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)	(HR)		
ALTERNATE		1	STORM		2																
76	1450	6807	6.4	6775	6.5	---	---	0	2.03	.05	1	.200	1.51	.007	.995	141	.782	.10	.04		
77	1050	6880	6.5	6873	6.6	6932	6.6	0	2.03	.05	1	.160	1.50	.006	.999	125	.847	.05	.03		
78	2450	6932	6.6	6815	6.7	6894	6.6	0	2.04	.05	1	.190	1.51	.015	.983	246	.54	.10	.07		

TR20 XED 8/ 2/93 9: 1
REV PC/09/83

SHOOKS RUN 90-909 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU

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JOB 1 SUMMARY
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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
STRUCTURE 33	1.92		
ALTERNATE 1		842.58	2347.33
XSECTION 1	.10		
ALTERNATE 1		69.79	152.04
XSECTION 2	.20		
ALTERNATE 1		152.57	317.92
XSECTION 3	.37		
ALTERNATE 1		240.17	515.76
XSECTION 4	.55		
ALTERNATE 1		361.84	765.94
XSECTION 5	.64		
ALTERNATE 1		394.51	856.44
XSECTION 6	.76		
ALTERNATE 1		444.99	979.69
XSECTION 7	.86		
ALTERNATE 1		481.97	1059.46
XSECTION 8	.10		
ALTERNATE 1		99.97	182.28
XSECTION 9	.25		
ALTERNATE 1		201.15	384.66
XSECTION 10	1.24		
ALTERNATE 1		679.19	1479.00
XSECTION 11	.13		
ALTERNATE 1		107.76	223.39
XSECTION 12	.22		
ALTERNATE 1		170.45	356.06
XSECTION 13	.35		
ALTERNATE 1		259.90	548.85

TR20 XEQ 8/ 2/93 9: 1
REV PC/09/83

SHOOKS RUN 90-809 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU

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JOB 1 SUMMARY
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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
XSECTION 14	.12		
ALTERNATE 1		72.41	160.63
XSECTION 15	.57		
ALTERNATE 1		383.82	827.30
XSECTION 16	.11		
ALTERNATE 1		97.61	189.30
XSECTION 17	1.20		
ALTERNATE 1		924.29	1460.23
XSECTION 18	.98		
ALTERNATE 1		251.18	1111.57
XSECTION 19	.08		
ALTERNATE 1		70.79	141.09
XSECTION 20	.15		
ALTERNATE 1		95.42	206.92
XSECTION 21	.24		
ALTERNATE 1		146.88	324.10
XSECTION 22	.13		
ALTERNATE 1		95.53	201.77
XSECTION 23	.60		
ALTERNATE 1		389.81	841.37
XSECTION 24	.10		
ALTERNATE 1		69.16	146.06
XSECTION 25	.21		
ALTERNATE 1		136.96	294.19
XSECTION 26	.10		
ALTERNATE 1		68.84	148.68
XSECTION 27	.81		
ALTERNATE 1		506.49	1112.52

TR20 XEQ 8/ 2/93 9: 1
REV PC/09/83

SHOOKS RUN 90-809 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU

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JOB 1 SUMMARY
PAGE 29

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
XSECTION 28	1.12		
ALTERNATE 1		663.51	1476.22
XSECTION 29	.16		
ALTERNATE 1		118.58	245.29
XSECTION 30	.16		
ALTERNATE 1		176.87	322.63
XSECTION 31	.31		
ALTERNATE 1		313.62	592.69
XSECTION 32	.48		
ALTERNATE 1		468.62	896.12
XSECTION 33	1.92		
ALTERNATE 1		1222.30	2620.09
XSECTION 34	3.04		
ALTERNATE 1		1049.45	3459.19
XSECTION 35	3.18		
ALTERNATE 1		1078.50	3555.84
XSECTION 36	3.30		
ALTERNATE 1		1104.47	3664.23
XSECTION 37	.13		
ALTERNATE 1		109.97	218.76
XSECTION 38	.19		
ALTERNATE 1		96.65	206.02
XSECTION 39	.15		
ALTERNATE 1		96.40	199.94
XSECTION 40	3.94		
ALTERNATE 1		1170.37	3942.23
XSECTION 41	4.09		
ALTERNATE 1		1170.72	3962.51

TR20 XED 8/ 2/93 9: 1
REV PC/09/93

SHOOKS RUN 90-909 TYPE IIA DIST. FUT. COND.-EXIST. ROUTING
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU

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JOB 1 SUMMARY
PAGE 30

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
XSECTION 42	.14		
ALTERNATE 1		76.50	162.85
XSECTION 43	.27		
ALTERNATE 1		143.39	302.91
XSECTION 44	.36		
ALTERNATE 1		175.76	381.00
XSECTION 45	4.55		
ALTERNATE 1		1276.16	4304.92
XSECTION 46	.14		
ALTERNATE 1		102.72	209.98
XSECTION 47	.29		
ALTERNATE 1		177.18	386.35
XSECTION 48	.13		
ALTERNATE 1		93.53	189.59
XSECTION 49	.22		
ALTERNATE 1		114.71	250.80
XSECTION 50	.12		
ALTERNATE 1		68.51	140.47
XSECTION 51	.13		
ALTERNATE 1		218.59	467.68
XSECTION 52	5.42		
ALTERNATE 1		1476.65	4877.10
XSECTION 53	.14		
ALTERNATE 1		87.98	188.83
XSECTION 54	5.73		
ALTERNATE 1		1502.75	4934.99
XSECTION 55	5.85		
ALTERNATE 1		1532.52	5021.54

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
XSECTION 56	4.01		
ALTERNATE 1		1548.29	5061.11
XSECTION 57	.16		
ALTERNATE 1		142.80	275.48
XSECTION 58	.11		
ALTERNATE 1		99.51	193.59
XSECTION 59	.38		
ALTERNATE 1		323.80	644.88
XSECTION 60	.50		
ALTERNATE 1		416.74	836.31
XSECTION 61	.63		
ALTERNATE 1		570.66	1113.33
XSECTION 62	.18		
ALTERNATE 1		284.94	479.28
XSECTION 63	.93		
ALTERNATE 1		1028.60	1887.14
XSECTION 64	1.04		
ALTERNATE 1		1140.29	2096.61
XSECTION 65	1.13		
ALTERNATE 1		1183.13	2208.32
XSECTION 66	1.25		
ALTERNATE 1		1330.57	2458.57
XSECTION 67	1.41		
ALTERNATE 1		1387.14	2630.16
XSECTION 68	7.53		
ALTERNATE 1		2536.28	6020.70
XSECTION 69	.11		
ALTERNATE 1		115.35	211.28

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
XSECTION 70	.27		
ALTERNATE 1		259.62	498.36
XSECTION 71	7.95		
ALTERNATE 1		2913.99	6703.97
XSECTION 72	9.06		
ALTERNATE 1		2903.45	6725.83
XSECTION 73	.15		
ALTERNATE 1		286.84	451.45
XSECTION 74	8.33		
ALTERNATE 1		2945.09	6818.25
XSECTION 75	.11		
ALTERNATE 1		113.43	214.26
XSECTION 76	9.53		
ALTERNATE 1		2973.07	6894.00
XSECTION 77	8.67		
ALTERNATE 1		2985.85	6937.83
XSECTION 78	9.90		
ALTERNATE 1		2949.03	6910.27

MAIN - UNEXPECTED RECORD FOUND(IGNORED) >>>

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G. TR-20 ANALYSIS
DIVERSION IMPROVEMENT ALTERNATIVE

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

JOB TR-20	SUMMARY					NO PLOTS	10
TITLE	SHOOKS RUN 90-809	TYPE IIA DIST.	FUT. COND.-VAN BUREN DIVERSION				20
TITLE	PASS 1=10-YEAR 24-HOUR	PASS 2=100-YEAR 24-HOUR	SHKFU-3				30
5 RAINFL 7	0.25						40
8	0.0000	0.0005	0.0015	0.0030	0.0045		50
8	0.0060	0.0080	0.0100	0.0120	0.0143		60
8	0.0165	0.0188	0.0210	0.0233	0.0255		70
8	0.0278	0.0320	0.0390	0.0460	0.0530		80
8	0.0600	0.0750	0.1000	0.4000	0.7000		90
8	0.7250	0.7500	0.7650	0.7800	0.7900		100
8	0.8000	0.8100	0.8200	0.8250	0.8300		110
8	0.8350	0.8400	0.8450	0.8500	0.8550		120
8	0.8600	0.8638	0.8675	0.8713	0.8750		130
8	0.8788	0.8825	0.8863	0.8900	0.8938		140
8	0.8975	0.9013	0.9050	0.9083	0.9115		150
8	0.9148	0.9180	0.9210	0.9240	0.9270		160
8	0.9300	0.9325	0.9350	0.9375	0.9400		170
8	0.9425	0.9450	0.9475	0.9500	0.9525		180
8	0.9550	0.9575	0.9600	0.9625	0.9650		190
8	0.9675	0.9700	0.9725	0.9750	0.9775		200
8	0.9800	0.9813	0.9825	0.9838	0.9850		210
8	0.9863	0.9875	0.9888	0.9900	0.9913		220
8	0.9925	0.9938	0.9950	0.9963	0.9975		230
8	0.9988	1.0000	1.0000	1.0000	1.0000		240
9 ENDTBL							250
3 STRUCT	33						B 10
8	6104.5	0.0	0.0				B 20
8	6106.0	30.0	0.8				B 30
8	6107.0	70.0	2.1				B 40
8	6108.0	120.0	4.0				B 50
8	6109.0	170.0	6.4				B 60
8	6110.0	210.0	9.1				B 70
8	6111.0	250.0	12.1				B 80
8	6112.0	280.0	15.5				B 90
8	6113.0	310.0	19.2				B100
8	6113.5	335.0	21.2				B110
8	6114.0	420.0	23.3				B120
8	6114.5	545.0	25.4				B130
8	6115.0	705.0	27.6				B140
8	6115.5	895.0	29.9				B150
8	6116.0	1105.0	32.2				B160
8	6116.5	1350.0	34.6				B170
8	6117.0	1615.0	37.1				B180
8	6117.5	1910.0	39.7				B190
8	6118.0	2225.0	42.3				B200
8	6118.5	3050.0	45.1				B210

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

9 ENDTBL										B220
6	RUNOFF	1	18	1	0.150	74.0	0.80			740
6	RUNOFF	1	19	2	0.078	77.0	0.30			780
6	RUNOFF	1	20	3	0.150	74.0	0.40			790
6	REACH	3	21	3 4	2300.0	3.07	1.33			800
6	RUNOFF	1	21	3	0.089	75.0	0.35			810
6	ADDHYD	4	21	4 3 5						920
6	RUNOFF	1	22	3	0.134	75.0	0.37			830
6	REACH	3	23	3 4	3100.0	1.59	1.33			840
6	RUNOFF	1	23	3	0.148	77.0	0.47			850
6	ADDHYD	4	23	4 3 6						860
6	REACH	3	23	2 3	3700.0	9.64	1.34			870
6	ADDHYD	4	23	6 3 2						880
6	ADDHYD	4	23	5 2 3						890
6	RUNOFF	1	24	2	0.097	75.0	0.37			900
6	REACH	3	25	2 4	2350.0	1.33	1.33			910
6	RUNOFF	1	25	2	0.111	77.0	0.38			920
6	ADDHYD	4	25	4 2 6						930
6	RUNOFF	1	26	2	0.102	75.0	0.37			940
6	REACH	3	26	2 4	1800.0	2.52	1.33			950
6	RUNOFF	1	27	2	0.108	75.0	0.35			960
6	ADDHYD	4	27	4 2 5						970
6	REACH	3	27	3 2	1750.0	0.75	1.53			980
6	ADDHYD	4	27	5 2 3						990
6	REACH	3	28	6 2	3400.0	2.47	1.33			1000
6	RUNOFF	1	28	4	0.103	80.0	0.30			1010
6	ADDHYD	4	28	2 4 5						1020
6	REACH	3	28	3 4	2250.0	2.52	1.33			1030
6	ADDHYD	4	28	5 4 2						1040
6	RUNOFF	1	29	3	0.156	76.0	0.37			1050
6	RUNOFF	1	30	4	0.156	83.0	0.37			1060
6	REACH	3	31	4 5	2000.0	4.55	1.40			1070
6	RUNOFF	1	31	4	0.159	79.0	0.40			1080
6	ADDHYD	4	31	5 4 6						1090
6	REACH	3	32	6 4	1700.0	3.18	1.46			1100
6	RUNOFF	1	32	5	0.169	79.0	0.35			1110
6	ADDHYD	4	32	4 5 6						1120
6	REACH	3	33	2 4	2900.0	1.75	1.33			1130
6	RUNOFF	1	33	5	0.156	86.0	0.35			1140
6	ADDHYD	4	33	4 5 2						1150
6	REACH	3	33	3 4	1200.0	0.88	1.49			1160
6	REACH	3	33	6 3	1300.0	0.98	1.46			1170
6	ADDHYD	4	33	2 4 5						1180
6	ADDHYD	4	33	3 5 2				1 1 1		1190
6	RESVOR	2	33	2 3	6105.0			1 1 1		1200

*****B0-80 LIST OF INPUT DATA (CONTINUED)*****

6	RUNOFF	1	34		3	0.138	75.0	0.48	1220
6	ADDHYD	4	34	2	3				1230
6	ADDHYD	4	34	1	4				1240
6	REACH	3	35	2	1	1250.0	2.47	1.51	1250
6	RUNOFF	1	35		2	0.139	75.0	0.43	1260
6	ADDHYD	4	35	1	2				1270
6	REACH	3	36	3	1	700.0	0.21	1.52	1280
6	RUNOFF	1	36		2	0.122	81.0	0.45	1290
6	ADDHYD	4	36	1	2				1300
6	RUNOFF	1	37		1	0.128	78.0	0.37	1310
6	RUNOFF	1	38		2	0.186	76.0	0.67	1320
6	RUNOFF	1	39		4	0.152	77.0	0.55	1330
6	REACH	3	40	4	5	1800.0	1.13	1.33	1340
6	RUNOFF	1	40		4	0.172	74.0	0.38	1350
6	ADDHYD	4	40	5	4				1360
6	REACH	3	40	3	4	2650.0	0.21	1.52	1370
6	REACH	3	40	1	3	1050.0	0.22	1.59	1380
6	REACH	3	40	2	5	650.0	0.22	1.59	1390
6	ADDHYD	4	40	6	3				1400
6	ADDHYD	4	40	5	1				1410
6	ADDHYD	4	40	4	3				1420
6	REACH	3	41	1	2	1700.0	0.20	1.52	1430
6	RUNOFF	1	41		1	0.153	77.0	0.50	1440
6	ADDHYD	4	41	2	1				1450
6	RUNOFF	1	42		1	0.141	76.0	0.63	1460
6	REACH	3	43	1	2	500.0	4.27	1.42	1470
6	RUNOFF	1	43		1	0.131	77.0	0.73	1480
6	ADDHYD	4	43	2	1				1490
6	REACH	3	44	4	1	2750.0	3.97	1.44	1500
6	RUNOFF	1	44		2	0.092	75.0	0.38	1510
6	ADDHYD	4	44	1	2				1520
6	REACH	3	45	4	1	2800.0	3.97	1.44	1530
6	RUNOFF	1	45		2	0.100	78.0	0.40	1540
6	ADDHYD	4	45	1	2				1550
6	ADDHYD	4	45	3	4				1560
6	RUNOFF	1	46		2	0.138	77.0	0.43	1570
6	REACH	3	47	2	3	1050.0	2.26	1.33	1580
6	RUNOFF	1	47		2	0.155	75.0	0.38	1590
6	ADDHYD	4	47	3	2				1600
6	RUNOFF	1	48		2	0.134	78.0	0.53	1610
6	REACH	3	49	2	3	3600.0	1.51	1.33	1620
6	RUNOFF	1	49		2	0.083	75.0	0.42	1630
6	ADDHYD	4	49	3	2				1640
6	RUNOFF	1	50		2	0.120	78.0	0.70	1650
6	REACH	3	51	5	3	2100.0	1.51	1.33	1660
6	REACH	3	51	2	5	2600.0	1.43	1.33	1670

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

6 ADDHYD 4 51 3 5 2						1680
6 RUNOFF 1 51 3	0.094	85.0	0.37			1690
6 ADDHYD 4 51 2 3 5						1700
6 REACH 3 52 5 2	2700.0	1.51	1.33			1710
6 RUNOFF 1 52 3	0.139	77.0	0.50			1720
6 ADDHYD 4 52 2 3 5						1730
6 ADDHYD 4 52 4 5 2						1740
6 REACH 3 52 1 3	1250.0	0.21	1.52			1750
6 ADDHYD 4 52 2 3 1						1760
6 RUNOFF 1 53 2	0.142	75.0	0.47			1770
6 REACH 3 54 1 3	1800.0	0.19	1.52			1780
6 REACH 3 54 2 1	650.0	3.19	1.33			1790
6 RUNOFF 1 54 4	0.167	79.0	0.47			1800
6 ADDHYD 4 54 1 4 2						1810
6 ADDHYD 4 54 3 2 1						1820
6 RUNOFF 1 55 2	0.123	89.0	0.58			1830
6 ADDHYD 4 55 1 2 3						1840
6 REACH 3 56 3 1	1900.0	0.48	1.53			1850
6 RUNOFF 1 56 2	0.159	83.0	0.38			1860
6 ADDHYD 4 56 1 2 3						1870
6 RUNOFF 1 57 1	0.158	80.0	0.42			1880
6 RUNOFF 1 58 2	0.106	79.0	0.35			1890
6 REACH 3 59 1 4	1350.0	5.05	1.42			1900
6 REACH 3 59 2 5	1900.0	2.42	1.33			1910
6 ADDHYD 4 59 4 5 1						1920
6 RUNOFF 1 59 2	0.114	76.0	0.32			1930
6 ADDHYD 4 59 1 2 4						1940
6 REACH 3 60 4 1	1200.0	3.31	1.42			1950
6 RUNOFF 1 60 2	0.117	76.0	0.33			1960
6 ADDHYD 4 60 1 2 4						1970
6 REACH 3 61 4 1	1800.0	4.35	1.44			1980
6 RUNOFF 1 61 2	0.130	84.0	0.37			1990
6 ADDHYD 4 61 1 2 4						2000
6 RUNOFF 1 62 1	0.178	87.0	0.25			2010
6 REACH 3 63 1 2	1400.0	6.43	1.40			2020
6 RUNOFF 1 63 1	0.131	89.0	0.38			2030
6 ADDHYD 4 63 2 1 5						2040
6 ADDHYD 4 63 4 5 1						2050
6 REACH 3 64 1 2	1250.0	1.43	1.33			2060
6 RUNOFF 1 64 1	0.106	85.0	0.45			2070
6 ADDHYD 4 64 2 1 4						2080
6 REACH 3 65 4 1	1600.0	1.51	1.33			2090
6 RUNOFF 1 65 2	0.094	77.0	0.33			2100
6 ADDHYD 4 65 1 2 4						2110
6 RUNOFF 1 66 1	0.116	89.0	0.38			2120
6 ADDHYD 4 66 1 4 2						2130

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

6 REACH	3	67	2	1	4300.0	1.29	1.51		2140
6 RUNOFF	1	67		2	0.164	78.0	0.38		2150
6 ADDHYD	4	67	1	2	4				2160
6 RUNOFF	1	68		1	0.109	91.0	0.27		2170
6 ADDHYD	4	68	4	1	2				2180
6 ADDHYD	4	68	3	2	1				2190
6 RUNOFF	1	69		2	0.106	83.0	0.40		2200
6 REACH	3	70	2	3	1500.0	0.67	1.50		2210
6 RUNOFF	1	70		2	0.163	80.0	0.35		2220
6 ADDHYD	4	70	3	2	4				2230
6 REACH	3	71	4	2	2950.0	1.42	1.33		2240
6 RUNOFF	1	71		3	0.150	89.0	0.48		2250
6 ADDHYD	4	71	2	3	4				2260
6 REACH	3	71	1	2	650.0	0.79	1.33		2270
6 ADDHYD	4	71	4	2	1				2280
6 REACH	3	72	1	2	1300.0	0.14	1.50		2290
6 RUNOFF	1	72		1	0.114	87.0	0.33		2300
6 ADDHYD	4	72	2	1	3				2310
6 RUNOFF	1	73		1	0.150	92.0	0.27		2320
6 RUNOFF	1	74		2	0.114	86.0	0.30		2330
6 ADDHYD	4	74	1	2	4				2340
6 REACH	3	74	3	1	1500.0	0.22	1.51		2350
6 ADDHYD	4	74	4	1	2				2360
6 RUNOFF	1	75		1	0.113	91.0	0.38		2370
6 RUNOFF	1	76		3	0.086	83.0	0.43		2380
6 ADDHYD	4	76	1	3	4				2390
6 REACH	3	76	2	1	1450.0	0.20	1.51		2400
6 ADDHYD	4	76	4	1	2				2410
6 REACH	3	77	2	1	1050.0	0.16	1.50		2420
6 RUNOFF	1	77		2	0.141	84.0	0.37		2430
6 ADDHYD	4	77	1	2	3				2440
6 REACH	3	78	3	1	2450.0	0.19	1.51		2470
6 RUNOFF	1	78		2	0.136	84.0	0.55		2480
6 ADDHYD	4	78	1	2	3				2490
ENDATA									2500
7 INCREM	6				0.05				2510
7 COMPUT	7	018	078		0.0	3.10	1.0	7 2 01 01	2520
ENDCMP	1								2530
7 INCREM	6				0.05				2540
7 COMPUT	7	018	078		0.0	4.50	1.0	7 2 01 02	2550
ENDCMP	1								2560
ENDJOB	2								2570

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

COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY USER NOTES

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

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

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

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

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

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

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

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

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

PROGRAM CHANGES SINCE MAY 1982:

12/17/82 - CORRECT PEAK RATE FACTOR FOR USER ENTERED DIMHYD

CORRECT REACH ROUTING PEAK TRAVEL TIME PRINTED WITH FULLPRINT OPTION

5/02/83 - CORRECT COMPUTATIONS FOR ---

1. DIVISION OF BASEFLOW IN DIVERT OPERATION
2. HYDROGRAPH VOLUME SPLIT BETWEEN BASEFLOW AND ABOVE BASEFLOW
3. CROSS SECTION DATA PLOTTING POSITION
4. INTERMEDIATE PEAK WHEN "FROM" AREA IS LARGER THAN "THRU" AREA
5. STORAGE ROUTED REACH TRAVEL TIME FOR MULTYPEAK HYDROGRAPH
6. ORDERING "FLOW-FREQ" FILE FROM SUMMARY TABLE #3 DATA
7. BASEFLOW ENTERED WITH READHYD
8. LOW FLOW SPLIT DURING DIVERT PROCEDURE #2 WHEN SECTION RATINGS START AT DIFFERENT ELEVATIONS

ENHANCEMENTS ---

1. REPLACE USER MANUAL ERROR CODES (PAGE 4-9 TO 4-11) WITH MESSAGES
2. LABEL OUTPUT HYDROGRAPH FILES WITH CROSS SECTION/STRUCTURE, ALTERNATE AND STORM NO'S

09/01/83 - CORRECT INPUT AND OUTPUT ERRORS FOR INTERMEDIATE PEAKS

CORRECT COMBINATION OF RATING TABLES FOR DIVERT

CHECK REACH ROUTING PARAMETERS FOR ACCEPTABLE LIMITS

ELIMINATE MINIMUM REACH TRAVEL TIME WHEN ATT-KIN COEFFICIENT EQUALS ONE

TR20 XEQ 8/ 2/93 9:21 SHOOKS RUN 90-809 TYPE IIA DIST. FUT. COND.-VAN BUREN DIVERSION 20 JOB 1 PASS 1
 REV PC/09/83 PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU-3 30 PAGE 2

EXECUTIVE CONTROL OPERATION INCREM MAIN TIME INCREMENT = .05 HOURS RECORD ID 2510

EXECUTIVE CONTROL OPERATION COMPUT FROM XSECTION 19 TO XSECTION 78 RECORD ID 2520
 STARTING TIME = .00 RAIN DEPTH = 3.10 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
 ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .05 HOURS

*** WARNING REACH 23 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 31 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

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

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	1222.30	(NULL)
10.02	50.84	(NULL)
12.97	39.26	(NULL)

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .05 HOURS	DRAINAGE AREA = 1.92 SQ.MI.
5.50	DISCHG .00 .56 3.35 12.45 33.60 73.43 138.39 231.97 353.67 500.26		
6.00	DISCHG 666.55 842.30 1007.70 1136.80 1209.07 1220.34 1180.89 1107.48 1015.29 915.14		
6.50	DISCHG 814.99 719.06 629.93 549.40 478.34 416.82 364.46 320.57 284.28 254.57		
7.00	DISCHG 230.46 210.98 195.04 181.56 169.69 158.94 149.24 140.60 133.01 126.44		
7.50	DISCHG 120.83 116.10 112.17 108.98 106.44 104.46 102.96 101.83 100.99 100.39		
8.00	DISCHG 99.95 99.53 98.82 97.37 94.87 91.33 87.07 82.47 77.86 73.48		
8.50	DISCHG 69.46 65.88 62.76 60.12 57.94 56.18 54.78 53.69 52.85 52.21		
9.00	DISCHG 51.73 51.37 51.10 50.91 50.78 50.68 50.62 50.59 50.57 50.57		
9.50	DISCHG 50.57 50.59 50.61 50.63 50.66 50.68 50.71 50.74 50.77 50.81		
10.00	DISCHG 50.83 50.83 50.73 50.42 49.85 49.01 47.99 46.87 45.72 44.61		
10.50	DISCHG 43.56 42.60 41.75 41.04 40.47 40.03 39.71 39.47 39.28 39.13		
11.00	DISCHG 38.99 38.87 38.77 38.70 38.67 38.67 38.69 38.73 38.76 38.78		
11.50	DISCHG 38.77 38.75 38.72 38.71 38.72 38.75 38.80 38.86 38.90 38.93		
12.00	DISCHG 38.93 38.91 38.89 38.88 38.89 38.92 38.97 39.03 39.07 39.09		
12.50	DISCHG 39.09 39.08 39.05 39.04 39.05 39.09 39.14 39.19 39.24 39.26		
13.00	DISCHG 39.26 39.23 39.15 38.99 38.75 38.41 38.01 37.58 37.13 36.69		
13.50	DISCHG 36.26 35.85 35.49 35.19 34.96 34.80 34.70 34.63 34.57 34.52		
14.00	DISCHG 34.46 34.39 34.30 34.17 34.00 33.79 33.56 33.32 33.09 32.87		
14.50	DISCHG 32.67 32.50 32.36 32.24 32.14 32.07 32.01 31.96 31.93 31.91		

RUNOFF VOLUME ABOVE BASEFLOW = 1.03 WATERSHED INCHES. 1279.26 CFS-HRS. 105.72 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.00	10.00	6105.00
5.49	842.58	6115.36
17.10	39.14	6106.23

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.05 HOURS	DRAINAGE AREA =	1.92 SQ.MI.					
.00	DISCHG	10.00	8.56	7.33	6.28	5.37	4.60	3.94	3.37	2.89	2.47
.50	DISCHG	2.12	1.81	1.55	1.33	1.14	.97	.83	.71	.61	.52
1.00	DISCHG	.45	.38	.33	.28	.24	.21	.19	.15	.13	.11
1.50	DISCHG	.09	.08	.07	.06	.05	.04	.04	.03	.03	.02
2.00	DISCHG	.02	.02	.01	.01	.01	.01	.01	.01	.01	.00
2.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5.50	DISCHG	.00	.04	.32	1.41	4.52	11.56	25.13	45.09	74.06	110.45
6.00	DISCHG	151.40	192.43	233.42	268.96	299.63	351.05	508.23	667.29	777.83	832.47
6.50	DISCHG	841.97	820.12	777.66	722.84	666.39	609.22	552.11	505.06	460.67	419.14
7.00	DISCHG	391.88	365.46	340.39	329.10	321.37	313.46	307.02	301.67	296.24	290.75
7.50	DISCHG	285.25	279.73	273.80	267.95	262.22	256.60	251.13	243.71	236.08	228.82
8.00	DISCHG	221.93	215.37	209.05	202.46	196.14	190.02	184.03	178.14	172.32	165.24
8.50	DISCHG	157.50	150.09	143.01	136.28	129.90	123.89	117.81	111.25	105.27	99.83
9.00	DISCHG	91.89	90.42	86.38	82.73	79.45	76.48	73.82	71.43	69.16	66.94
9.50	DISCHG	64.98	63.26	61.75	60.42	59.25	58.22	57.32	56.53	55.84	55.24
10.00	DISCHG	54.71	54.25	53.83	53.44	53.05	52.62	52.12	51.56	50.93	50.24
10.50	DISCHG	49.51	48.74	47.95	47.17	46.40	45.67	44.97	44.33	43.74	43.20
11.00	DISCHG	42.70	42.25	41.84	41.47	41.14	40.84	40.58	40.36	40.17	40.00
11.50	DISCHG	39.85	39.72	39.60	39.50	39.40	39.33	39.26	39.21	39.17	39.14
12.00	DISCHG	39.11	39.09	39.07	39.04	39.03	39.01	39.00	39.00	39.01	39.02
12.50	DISCHG	39.03	39.03	39.04	39.04	39.04	39.04	39.05	39.07	39.08	39.10
13.00	DISCHG	39.12	39.14	39.14	39.13	39.10	39.04	38.94	38.80	38.63	38.42
13.50	DISCHG	38.19	37.94	37.67	37.39	37.11	36.85	36.59	36.36	36.15	35.96
14.00	DISCHG	35.78	35.62	35.47	35.32	35.17	35.02	34.86	34.69	34.51	34.33
14.50	DISCHG	34.14	33.96	33.77	33.60	33.43	33.27	33.12	32.99	32.86	32.75

RUNOFF VOLUME ABOVE BASEFLOW = 1.03 WATERSHED INCHES. 1271.43 CFS-HRS. 105.07 ACRE-FEET; BASEFLOW = .00 CFS

*** WARNING REACH 35 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 43 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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*** WARNING REACH 44 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 45 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 54 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 56 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 59 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 60 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 61 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 63 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 64 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 65 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 71 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 77 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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EXECUTIVE CONTROL OPERATION ENDCMP COMPUTATIONS COMPLETED FOR PASS 1 RECORD ID 2530

EXECUTIVE CONTROL OPERATION INCREM MAIN TIME INCREMENT = .05 HOURS RECORD ID 2540

EXECUTIVE CONTROL OPERATION COMPUT FROM XSECTION 18 TO XSECTION 78 RECORD ID 2550

STARTING TIME = .00 RAIN DEPTH = 4.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2

ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .05 HOURS

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*** WARNING REACH 23 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 27 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 28 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 31 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 32 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 33 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

OPERATION ADDHYD CROSS SECTION 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	2620.09	(NULL)
10.00	86.80	(NULL)
12.96	66.40	(NULL)

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.05 HOURS	DRAINAGE AREA =	1.92 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .01 .04			.14 .38 .79	
5.50	DISCHG	1.51 4.61 15.61 47.51 116.51 236.51 414.71			649.37 932.64 1254.39	
6.00	DISCHG	1601.44 1952.47 2269.06 2501.89 2612.03 2593.10 2467.36			2268.96 2031.25 1781.50	
6.50	DISCHG	1540.83 1320.40 1125.97 959.84 820.95 706.08 611.74			534.70 472.21 421.88	
7.00	DISCHG	381.71 349.83 324.19 302.79 283.98 266.84 251.18			237.03 224.41 213.39	
7.50	DISCHG	204.02 196.22 189.88 184.85 180.99 178.08 175.92			174.34 173.20 172.39	
8.00	DISCHG	171.80 171.22 170.05 167.54 163.07 156.66 148.89			140.42 131.89 123.80	
8.50	DISCHG	116.51 110.15 104.79 100.41 96.94 94.24 92.18			90.62 89.45 88.58	
9.00	DISCHG	87.94 87.47 87.13 86.89 86.72 86.61 86.54			86.51 86.49 86.49	
9.50	DISCHG	86.50 86.52 86.54 86.57 86.60 86.63 86.67			86.70 86.74 86.77	
10.00	DISCHG	86.80 86.78 86.58 86.03 84.98 83.46 81.59			79.53 77.42 75.38	
10.50	DISCHG	73.48 71.79 70.33 69.14 68.23 67.55 67.08			66.75 66.51 66.32	
11.00	DISCHG	66.13 65.96 65.81 65.70 65.64 65.65 65.70			65.77 65.83 65.86	
11.50	DISCHG	65.85 65.81 65.75 65.71 65.71 65.75 65.83			65.92 65.99 66.03	
12.00	DISCHG	66.02 65.98 65.93 65.89 65.89 65.93 66.01			66.10 66.17 66.21	
12.50	DISCHG	66.21 66.17 66.11 66.08 66.08 66.12 66.19			66.29 66.36 66.39	
13.00	DISCHG	66.38 66.32 66.17 65.88 65.43 64.81 64.08			63.30 62.48 61.68	
13.50	DISCHG	60.91 60.20 59.58 59.08 58.71 58.46 58.31			58.23 58.17 58.11	
14.00	DISCHG	58.03 57.91 57.76 57.54 57.24 56.86 56.44			56.01 55.59 55.20	
14.50	DISCHG	54.85 54.56 54.32 54.12 53.97 53.86 53.77			53.71 53.66 53.63	

RUNOFF VOLUME ABOVE BASEFLOW = 2.01 WATERSHED INCHES. 2483.54 CFS-HRS. 205.24 ACRE-FEET; BASEFLOW = .00 CFS

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
.00	10.00	6105.00
6.34	2347.33	6118.07
13.07	66.25	6106.91

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.05 HOURS	DRAINAGE AREA =	1.92 SQ.MI.
.00	DISCHG	10.00 8.56 7.33 6.28 5.37 4.60 3.94			3.37 2.89 2.47	
.50	DISCHG	2.12 1.81 1.55 1.33 1.14 .97 .83			.71 .61 .52	
1.00	DISCHG	.45 .38 .33 .28 .24 .21 .18			.15 .13 .11	
1.50	DISCHG	.09 .08 .07 .06 .05 .04 .04			.03 .03 .02	
2.00	DISCHG	.02 .02 .01 .01 .01 .01 .01			.01 .01 .00	

2.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
3.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
4.50	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.02	.05	.13
5.50	DISCHG	.28	.68	2.03	6.28	17.17	38.38	72.35	119.76	173.75	226.59
6.00	DISCHG	277.39	338.03	722.09	1247.40	1720.41	2063.35	2272.81	2344.97	2219.45	2088.69
6.50	DISCHG	1917.51	1732.19	1542.97	1363.29	1199.15	1051.92	927.17	821.35	728.65	652.62
7.00	DISCHG	587.09	531.81	489.14	450.67	417.34	395.43	374.37	354.27	335.20	329.21
7.50	DISCHG	323.14	316.95	310.71	306.40	302.33	298.28	294.29	290.36	286.52	282.77
8.00	DISCHG	279.05	275.20	271.45	267.78	264.11	260.37	256.52	252.52	247.53	241.11
8.50	DISCHG	234.63	228.12	221.65	215.27	208.91	202.18	195.71	189.51	183.60	177.98
9.00	DISCHG	172.65	166.68	160.12	154.09	148.54	143.43	138.74	134.43	130.47	126.84
9.50	DISCHG	123.51	120.46	117.07	113.93	111.11	108.58	106.32	104.29	102.48	100.86
10.00	DISCHG	99.41	98.11	96.93	95.83	94.77	93.68	92.53	91.30	89.97	88.57
10.50	DISCHG	87.11	85.62	84.12	82.64	81.20	79.82	78.53	77.34	76.23	75.22
11.00	DISCHG	74.29	73.44	72.66	71.95	71.30	70.72	70.20	69.70	69.23	68.83
11.50	DISCHG	68.47	68.16	67.87	67.62	67.39	67.19	67.02	66.89	66.77	66.68
12.00	DISCHG	66.60	66.53	66.46	66.40	66.34	66.29	66.25	66.23	66.21	66.21
12.50	DISCHG	66.21	66.21	66.20	66.19	66.17	66.17	66.16	66.17	66.19	66.21
13.00	DISCHG	66.23	66.25	66.25	66.22	66.15	66.03	65.94	65.58	65.26	64.88
13.50	DISCHG	64.45	63.99	63.50	63.00	62.51	62.04	61.60	61.20	60.84	60.52
14.00	DISCHG	60.23	59.96	59.70	59.46	59.21	58.95	58.68	58.39	58.08	57.75
14.50	DISCHG	57.43	57.10	56.78	56.48	56.19	55.92	55.66	55.43	55.22	55.04

RUNOFF VOLUME ABOVE BASEFLOW = 2.00 WATERSHED INCHES. 2467.36 CFS-HRS. 203.90 ACRE-FEET: BASEFLOW = .00 CFS

*** WARNING REACH 35 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

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

*** WARNING REACH 43 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 45 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 52 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

*** WARNING REACH 56 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

*** WARNING REACH 59 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

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

TR20 XED 8/ 2/93 9:21
REV 00/09/83

SHOOKS RUN 90-909 TYPE IIA DIST. FUT. COND.-VAN BUREN DIVERSION 20
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHXFU-3 30

JOB 1 PASS 2
PAGE 7

*** WARNING REACH 61 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 63 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 64 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 65 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 67 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 71 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 72 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 74 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 76 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***
*** WARNING REACH 77 ATT-KIN COEFF.(C) GREATER THAN 0.667. CONSIDER REDUCING MAIN TIME INCREMENT ***

EXECUTIVE CONTROL OPERATION ENDCMP COMPUTATIONS COMPLETED FOR PASS 2

RECORD ID 2560

EXECUTIVE CONTROL OPERATION ENDJOB

RECORD ID 2570

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	1	STORM	1										
XSECTION 19	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.82	---	6.41	58.95	393.0
XSECTION 19	RUNOFF	.08	7	2	.05	.0	3.10	24.00	.98	---	6.08	70.79	907.6
XSECTION 20	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.83	---	6.14	95.42	636.2
XSECTION 21	REACH	.15	7	2	.05	.0	3.10	24.00	.82	---	6.23	90.24	601.6
XSECTION 21	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.88	---	6.11	65.58	736.9
XSECTION 21	ADDHYD	.24	7	2	.05	.0	3.10	24.00	.84	---	6.17	146.88	614.6
XSECTION 22	RUNOFF	.13	7	2	.05	.0	3.10	24.00	.88	---	6.12	95.53	712.9
XSECTION 23	REACH	.13	7	2	.05	.0	3.10	24.00	.87	---	6.26	77.64	579.4
XSECTION 23	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.98	---	6.17	104.68	707.3
XSECTION 23	ADDHYD	.28	7	2	.05	.0	3.10	24.00	.93	---	6.21	178.28	632.2
XSECTION 23	REACH	.08	7	2	.05	.0	3.10	24.00	.98	---	6.15	68.57	879.1
XSECTION 23	ADDHYD	.36	7	2	.05	.0	3.10	24.00	.94	---	6.19	243.32	675.9
XSECTION 23	ADDHYD	.50	7	2	.05	.0	3.10	24.00	.90	---	6.18	389.81	650.8
XSECTION 24	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.88	---	6.12	69.16	712.9
XSECTION 25	REACH	.10	7	2	.05	.0	3.10	24.00	.87	---	6.25	57.15	589.1
XSECTION 25	RUNOFF	.11	7	2	.05	.0	3.10	24.00	.98	---	6.12	88.32	795.7
XSECTION 25	ADDHYD	.21	7	2	.05	.0	3.10	24.00	.93	---	6.17	136.96	658.4
XSECTION 26	RUNOFF	.10	7	2	.05	.0	3.10	24.00	.88	---	6.12	72.72	712.9
XSECTION 26	REACH	.10	7	2	.05	.0	3.10	24.00	.87	---	6.21	68.84	674.9
XSECTION 27	RUNOFF	.11	7	2	.05	.0	3.10	24.00	.88	---	6.11	79.58	736.9
XSECTION 27	ADDHYD	.21	7	2	.05	.0	3.10	24.00	.88	---	6.15	142.45	678.3
XSECTION 27	REACH	.60	7	2	.05	.0	3.10	24.00	.90	---	6.25	380.86	635.8
XSECTION 27	ADDHYD	.81	7	2	.05	.0	3.10	24.00	.89	---	6.23	506.49	626.1
XSECTION 28	REACH	.21	7	2	.05	.0	3.10	24.00	.93	---	6.29	123.01	591.4
XSECTION 28	RUNOFF	.10	7	2	.05	.0	3.10	24.00	1.15	---	6.07	110.31	1070.9
XSECTION 28	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.00	---	6.15	195.71	629.3
XSECTION 28	REACH	.81	7	2	.05	.0	3.10	24.00	.89	---	6.30	495.09	612.0
XSECTION 28	ADDHYD	1.12	7	2	.05	.0	3.10	24.00	.92	---	6.28	663.51	592.4
XSECTION 29	RUNOFF	.16	7	2	.05	.0	3.10	24.00	.93	---	6.12	118.58	760.1
XSECTION 30	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.34	---	6.10	176.87	1133.8
XSECTION 31	REACH	.16	7	2	.05	.0	3.10	24.00	1.34	---	6.16	176.00	1128.2
XSECTION 31	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.09	---	6.13	138.54	871.3

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION	31	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.21	---	6.14	313.62	995.6
XSECTION	32	REACH	.31	7	2	.05	.0	3.10	24.00	1.21	---	6.14	313.62	995.6
XSECTION	32	RUNOFF	.17	7	2	.05	.0	3.10	24.00	1.09	---	6.10	158.65	938.8
XSECTION	32	ADDHYD	.48	7	2	.05	.0	3.10	24.00	1.17	---	6.13	468.62	968.2
XSECTION	33	REACH	1.12	7	2	.05	.0	3.10	24.00	.92	---	6.38	631.89	564.2
XSECTION	33	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.55	---	6.08	210.89	1351.8
XSECTION	33	ADDHYD	1.28	7	2	.05	.0	3.10	24.00	1.00	---	6.34	708.77	555.5
XSECTION	33	REACH	.16	7	2	.05	.0	3.10	24.00	.93	---	6.19	114.86	736.3
XSECTION	33	REACH	.48	7	2	.05	.0	3.10	24.00	1.17	---	6.19	463.94	958.6
XSECTION	33	ADDHYD	1.43	7	2	.05	.0	3.10	24.00	.99	---	6.30	797.38	556.8
XSECTION	33	ADDHYD	1.92	7	2	.05	.0	3.10	24.00	1.03	---	6.24	1222.30	637.9
STRUCTURE	33	RESVOR	1.92	7	2	.05	.0	3.10	24.00	1.03	6115.36	6.49	842.58	439.8
XSECTION	34	REACH	1.92	7	2	.05	.0	3.10	24.00	1.03	---	6.60	802.66	418.9
XSECTION	34	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.87	---	6.19	83.96	608.4
XSECTION	34	ADDHYD	2.05	7	2	.05	.0	3.10	24.00	1.02	---	6.60	831.21	404.7
XSECTION	34	ADDHYD	2.20	7	2	.05	.0	3.10	24.00	1.00	---	6.59	881.97	400.2
XSECTION	35	REACH	2.20	7	2	.05	.0	3.10	24.00	1.00	---	6.59	881.97	400.2
XSECTION	35	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.93	---	6.16	97.10	698.6
XSECTION	35	ADDHYD	2.34	7	2	.05	.0	3.10	24.00	1.00	---	6.58	909.31	388.1
XSECTION	36	REACH	2.34	7	2	.05	.0	3.10	24.00	1.00	---	6.64	905.84	386.6
XSECTION	36	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.21	---	6.15	113.67	931.7
XSECTION	36	ADDHYD	2.46	7	2	.05	.0	3.10	24.00	1.01	---	6.64	933.27	378.6
XSECTION	37	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.04	---	6.11	109.97	859.1
XSECTION	38	RUNOFF	.19	7	2	.05	.0	3.10	24.00	.92	---	6.31	96.65	519.6
XSECTION	39	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.98	---	6.23	96.40	634.2
XSECTION	40	REACH	.15	7	2	.05	.0	3.10	24.00	.97	---	6.35	87.71	577.1
XSECTION	40	RUNOFF	.17	7	2	.05	.0	3.10	24.00	.83	---	6.13	112.72	655.3
XSECTION	40	ADDHYD	.32	7	2	.05	.0	3.10	24.00	.90	---	6.19	173.13	534.3
XSECTION	40	REACH	2.46	7	2	.05	.0	3.10	24.00	1.00	---	6.78	868.09	352.2
XSECTION	40	REACH	.13	7	2	.05	.0	3.10	24.00	1.03	---	6.21	101.36	791.9
XSECTION	40	REACH	.19	7	2	.05	.0	3.10	24.00	.92	---	6.39	94.85	510.0
XSECTION	40	ADDHYD	.45	7	2	.05	.0	3.10	24.00	.93	---	6.20	274.29	606.8
XSECTION	40	ADDHYD	.64	7	2	.05	.0	3.10	24.00	.93	---	6.24	347.75	545.1
XSECTION	40	ADDHYD	3.10	7	2	.05	.0	3.10	24.00	.99	---	6.74	997.27	321.4
XSECTION	41	REACH	3.10	7	2	.05	.0	3.10	24.00	.98	---	6.84	978.83	315.4
XSECTION	41	RUNOFF	.15	7	2	.05	.0	3.10	24.00	.98	---	6.19	104.41	682.4

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 1													
XSECTION 41	ADDHYD	3.24	7	2	.05	.0	3.10	24.00	.98	---	6.83	999.85	307.1
XSECTION 42	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.92	---	6.28	76.50	542.6
XSECTION 43	REACH	.14	7	2	.05	.0	3.10	24.00	.92	---	6.28	76.50	542.6
XSECTION 43	RUNOFF	.13	7	2	.05	.0	3.10	24.00	.97	---	6.35	67.99	519.0
XSECTION 43	ADDHYD	.27	7	2	.05	.0	3.10	24.00	.95	---	6.31	143.39	527.2
XSECTION 44	REACH	.27	7	2	.05	.0	3.10	24.00	.95	---	6.38	141.73	521.1
XSECTION 44	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.88	---	6.13	64.44	700.4
XSECTION 44	ADDHYD	.36	7	2	.05	.0	3.10	24.00	.93	---	6.30	175.76	482.9
XSECTION 45	REACH	.36	7	2	.05	.0	3.10	24.00	.93	---	6.37	174.56	479.6
XSECTION 45	RUNOFF	.10	7	2	.05	.0	3.10	24.00	1.03	---	6.13	82.12	821.2
XSECTION 45	ADDHYD	.46	7	2	.05	.0	3.10	24.00	.95	---	6.27	226.11	487.3
XSECTION 45	ADDHYD	3.72	7	2	.05	.0	3.10	24.00	.98	---	6.79	1099.89	295.7
XSECTION 46	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.98	---	6.15	102.72	744.4
XSECTION 47	REACH	.14	7	2	.05	.0	3.10	24.00	.98	---	6.30	85.87	622.3
XSECTION 47	RUNOFF	.16	7	2	.05	.0	3.10	24.00	.88	---	6.13	108.56	700.4
XSECTION 47	ADDHYD	.29	7	2	.05	.0	3.10	24.00	.92	---	6.18	177.18	604.7
XSECTION 48	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.03	---	6.21	93.53	698.0
XSECTION 49	REACH	.13	7	2	.05	.0	3.10	24.00	1.03	---	6.38	76.42	570.3
XSECTION 49	RUNOFF	.08	7	2	.05	.0	3.10	24.00	.88	---	6.15	55.18	664.8
XSECTION 49	ADDHYD	.22	7	2	.05	.0	3.10	24.00	.97	---	6.27	114.71	528.6
XSECTION 50	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.03	---	6.32	68.51	570.9
XSECTION 51	REACH	.22	7	2	.05	.0	3.10	24.00	.97	---	6.40	107.87	497.1
XSECTION 51	REACH	.12	7	2	.05	.0	3.10	24.00	1.02	---	6.49	61.29	510.8
XSECTION 51	ADDHYD	.34	7	2	.05	.0	3.10	24.00	.99	---	6.43	167.42	496.8
XSECTION 51	RUNOFF	.09	7	2	.05	.0	3.10	24.00	1.48	---	6.09	117.97	1255.0
XSECTION 51	ADDHYD	.43	7	2	.05	.0	3.10	24.00	1.09	---	6.26	218.59	507.2
XSECTION 52	REACH	.43	7	2	.05	.0	3.10	24.00	1.09	---	6.42	208.71	484.2
XSECTION 52	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.98	---	6.19	94.85	682.4
XSECTION 52	ADDHYD	.57	7	2	.05	.0	3.10	24.00	1.06	---	6.30	282.56	495.7
XSECTION 52	ADDHYD	.86	7	2	.05	.0	3.10	24.00	1.02	---	6.24	447.55	518.6
XSECTION 52	REACH	3.72	7	2	.05	.0	3.10	24.00	.98	---	6.87	1094.44	294.2
XSECTION 52	ADDHYD	4.58	7	2	.05	.0	3.10	24.00	.99	---	6.46	1355.12	295.7
XSECTION 53	RUNOFF	.14	7	2	.05	.0	3.10	24.00	.87	---	6.18	87.98	619.6
XSECTION 54	REACH	4.58	7	2	.05	.0	3.10	24.00	.98	---	6.60	1330.09	290.2
XSECTION 54	REACH	.14	7	2	.05	.0	3.10	24.00	.87	---	6.18	87.98	619.6
XSECTION 54	RUNOFF	.17	7	2	.05	.0	3.10	24.00	1.09	---	6.17	133.62	800.1

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 1													
XSECTION 54	ADDHYD	.31	7	2	.05	.0	3.10	24.00	.99	---	6.17	221.63	717.2
XSECTION 54	ADDHYD	1.89	7	2	.05	.0	3.10	24.00	.98	---	6.55	1405.06	287.2
XSECTION 55	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.78	---	6.21	149.22	1213.2
XSECTION 55	ADDHYD	5.02	7	2	.05	.0	3.10	24.00	1.00	---	6.51	1482.21	295.6
XSECTION 56	REACH	5.02	7	2	.05	.0	3.10	24.00	1.00	---	6.58	1477.17	294.6
XSECTION 56	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.34	---	6.11	177.68	1117.5
XSECTION 56	ADDHYD	5.17	7	2	.05	.0	3.10	24.00	1.01	---	6.57	1514.48	292.7
XSECTION 57	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.14	142.80	903.8
XSECTION 58	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.09	---	6.10	99.51	938.8
XSECTION 59	REACH	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.14	142.80	903.8
XSECTION 59	REACH	.11	7	2	.05	.0	3.10	24.00	1.09	---	6.18	94.33	889.9
XSECTION 59	ADDHYD	.26	7	2	.05	.0	3.10	24.00	1.13	---	6.16	235.45	891.9
XSECTION 59	RUNOFF	.11	7	2	.05	.0	3.10	24.00	.93	---	6.09	94.61	829.9
XSECTION 59	ADDHYD	.38	7	2	.05	.0	3.10	24.00	1.07	---	6.13	323.80	856.6
XSECTION 60	REACH	.38	7	2	.05	.0	3.10	24.00	1.07	---	6.13	323.80	856.6
XSECTION 60	RUNOFF	.12	7	2	.05	.0	3.10	24.00	.93	---	6.10	94.70	809.4
XSECTION 60	ADDHYD	.50	7	2	.05	.0	3.10	24.00	1.03	---	6.12	416.74	841.9
XSECTION 61	REACH	.50	7	2	.05	.0	3.10	24.00	1.03	---	6.12	416.74	841.9
XSECTION 61	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.41	---	6.10	155.17	1193.6
XSECTION 61	ADDHYD	.63	7	2	.05	.0	3.10	24.00	1.11	---	6.12	570.66	913.1
XSECTION 62	RUNOFF	.18	7	2	.05	.0	3.10	24.00	1.63	---	6.04	284.94	1600.8
XSECTION 63	REACH	.18	7	2	.05	.0	3.10	24.00	1.63	---	6.04	284.94	1600.8
XSECTION 63	RUNOFF	.13	7	2	.05	.0	3.10	24.00	1.78	---	6.09	196.27	1498.2
XSECTION 63	ADDHYD	.31	7	2	.05	.0	3.10	24.00	1.69	---	6.05	476.45	1541.9
XSECTION 63	ADDHYD	.93	7	2	.05	.0	3.10	24.00	1.30	---	6.09	1028.60	1101.3
XSECTION 64	REACH	.93	7	2	.05	.0	3.10	24.00	1.30	---	6.14	1017.88	1089.8
XSECTION 64	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.48	---	6.14	122.43	1155.0
XSECTION 64	ADDHYD	1.04	7	2	.05	.0	3.10	24.00	1.32	---	6.14	1140.29	1096.4
XSECTION 65	REACH	1.04	7	2	.05	.0	3.10	24.00	1.32	---	6.21	1119.75	1076.7
XSECTION 65	RUNOFF	.09	7	2	.05	.0	3.10	24.00	.98	---	6.10	80.85	860.1
XSECTION 65	ADDHYD	1.13	7	2	.05	.0	3.10	24.00	1.29	---	6.20	1183.13	1043.3
XSECTION 66	RUNOFF	.12	7	2	.05	.0	3.10	24.00	1.78	---	6.09	173.79	1498.2
XSECTION 66	ADDHYD	1.25	7	2	.05	.0	3.10	24.00	1.34	---	6.19	1330.57	1064.5
XSECTION 67	REACH	1.25	7	2	.05	.0	3.10	24.00	1.33	---	6.27	1286.30	1029.0
XSECTION 67	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.04	---	6.12	138.65	845.4
XSECTION 67	ADDHYD	1.41	7	2	.05	.0	3.10	24.00	1.30	---	6.26	1387.14	981.0

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
XSECTION 68	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.95	---	6.03	200.78	1942.0	
XSECTION 68	ADDHYD	1.52	7	2	.05	.0	3.10	24.00	1.35	---	6.24	1468.51	964.2	
XSECTION 68	ADDHYD	6.70	7	2	.05	.0	3.10	24.00	1.09	---	6.31	2665.68	399.0	
XSECTION 69	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.34	---	6.12	115.35	1088.2	
XSECTION 70	REACH	.11	7	2	.05	.0	3.10	24.00	1.34	---	6.21	109.09	1029.1	
XSECTION 70	RUNOFF	.16	7	2	.05	.0	3.10	24.00	1.15	---	6.10	161.87	993.0	
XSECTION 70	ADDHYD	.27	7	2	.05	.0	3.10	24.00	1.22	---	6.13	259.62	965.1	
XSECTION 71	REACH	.27	7	2	.05	.0	3.10	24.00	1.22	---	6.26	228.36	848.9	
XSECTION 71	RUNOFF	.15	7	2	.05	.0	3.10	24.00	1.78	---	6.14	201.29	1341.9	
XSECTION 71	ADDHYD	.42	7	2	.05	.0	3.10	24.00	1.42	---	6.21	415.15	990.8	
XSECTION 71	REACH	6.70	7	2	.05	.0	3.10	24.00	1.09	---	6.31	2665.68	398.0	
XSECTION 71	ADDHYD	7.12	7	2	.05	.0	3.10	24.00	1.11	---	6.29	3046.11	428.1	
XSECTION 72	REACH	7.12	7	2	.05	.0	3.10	24.00	1.10	---	6.38	2982.66	419.1	
XSECTION 72	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.63	---	6.07	165.04	1447.7	
XSECTION 72	ADDHYD	7.23	7	2	.05	.0	3.10	24.00	1.11	---	6.37	3033.88	419.6	
XSECTION 73	RUNOFF	.15	7	2	.05	.0	3.10	24.00	2.04	---	6.03	286.84	1912.3	
XSECTION 74	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.55	---	6.06	164.51	1443.0	
XSECTION 74	ADDHYD	.26	7	2	.05	.0	3.10	24.00	1.83	---	6.04	450.06	1704.8	
XSECTION 74	REACH	7.23	7	2	.05	.0	3.10	24.00	1.11	---	6.45	3000.00	414.9	
XSECTION 74	ADDHYD	7.49	7	2	.05	.0	3.10	24.00	1.14	---	6.44	3072.19	410.0	
XSECTION 75	RUNOFF	.11	7	2	.05	.0	3.10	24.00	1.21	---	6.11	113.43	1003.8	
XSECTION 76	RUNOFF	.09	7	2	.05	.0	3.10	24.00	1.34	---	6.14	90.46	1051.9	
XSECTION 76	ADDHYD	.20	7	2	.05	.0	3.10	24.00	1.27	---	6.12	203.33	1021.8	
XSECTION 76	REACH	7.49	7	2	.05	.0	3.10	24.00	1.13	---	6.52	3041.99	405.9	
XSECTION 76	ADDHYD	7.69	7	2	.05	.0	3.10	24.00	1.14	---	6.51	3098.61	402.8	
XSECTION 77	REACH	7.69	7	2	.05	.0	3.10	24.00	1.14	---	6.58	3078.03	400.1	
XSECTION 77	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.41	---	6.10	168.30	1193.6	
XSECTION 77	ADDHYD	7.83	7	2	.05	.0	3.10	24.00	1.14	---	6.58	3110.03	397.0	
XSECTION 78	REACH	7.83	7	2	.05	.0	3.10	24.00	1.14	---	6.69	3025.57	386.2	
XSECTION 78	RUNOFF	.14	7	2	.05	.0	3.10	24.00	1.40	---	6.20	130.70	961.0	
XSECTION 78	ADDHYD	7.97	7	2	.05	.0	3.10	24.00	1.14	---	6.69	3066.19	384.7	
ALTERNATE 1 STORM 2														
XSECTION 18	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.71	---	6.38	132.00	880.0	
XSECTION 19	RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.94	---	6.07	141.09	1808.9	
XSECTION 20	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.72	---	6.12	206.92	1379.4	
XSECTION 21	REACH	.15	7	2	.05	.0	4.50	24.00	1.71	---	6.20	200.50	1336.7	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 21	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.79	---	6.10	137.90	1549.4	
XSECTION 21	ADDHYD	.24	7	2	.05	.0	4.50	24.00	1.74	---	6.15	324.10	1356.1	
XSECTION 22	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.79	---	6.10	201.77	1505.7	
XSECTION 23	REACH	.13	7	2	.05	.0	4.50	24.00	1.78	---	6.22	175.07	1306.5	
XSECTION 23	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.94	---	6.16	215.18	1453.9	
XSECTION 23	ADDHYD	.28	7	2	.05	.0	4.50	24.00	1.86	---	6.19	384.34	1362.9	
XSECTION 23	REACH	.08	7	2	.05	.0	4.50	24.00	1.94	---	6.13	139.11	1783.4	
XSECTION 23	ADDHYD	.36	7	2	.05	.0	4.50	24.00	1.88	---	6.17	517.79	1438.3	
XSECTION 23	ADDHYD	.60	7	2	.05	.0	4.50	24.00	1.83	---	6.16	841.37	1404.6	
XSECTION 24	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.10	146.06	1505.7	
XSECTION 25	REACH	.10	7	2	.05	.0	4.50	24.00	1.78	---	6.22	128.37	1323.4	
XSECTION 25	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.94	---	6.11	179.44	1616.6	
XSECTION 25	ADDHYD	.21	7	2	.05	.0	4.50	24.00	1.87	---	6.15	294.19	1414.4	
XSECTION 26	RUNOFF	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.10	153.58	1505.7	
XSECTION 26	REACH	.10	7	2	.05	.0	4.50	24.00	1.79	---	6.18	148.68	1457.6	
XSECTION 27	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.79	---	6.10	167.34	1549.4	
XSECTION 27	ADDHYD	.21	7	2	.05	.0	4.50	24.00	1.79	---	6.13	306.77	1460.8	
XSECTION 27	REACH	.60	7	2	.05	.0	4.50	24.00	1.82	---	6.22	832.60	1390.0	
XSECTION 27	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.81	---	6.20	1112.52	1375.2	
XSECTION 28	REACH	.21	7	2	.05	.0	4.50	24.00	1.86	---	6.25	273.85	1316.6	
XSECTION 29	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.18	---	6.06	208.93	2028.5	
XSECTION 28	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.97	---	6.14	421.29	1354.6	
XSECTION 28	REACH	.81	7	2	.05	.0	4.50	24.00	1.81	---	6.26	1097.94	1357.2	
XSECTION 28	ADDHYD	1.12	7	2	.05	.0	4.50	24.00	1.85	---	6.24	1476.22	1318.1	
XSECTION 29	RUNOFF	.16	7	2	.05	.0	4.50	24.00	1.87	---	6.10	245.29	1572.1	
XSECTION 30	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.09	322.63	2068.1	
XSECTION 31	REACH	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.14	322.44	2067.0	
XSECTION 31	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.09	---	6.11	271.81	1709.5	
XSECTION 31	ADDHYD	.31	7	2	.05	.0	4.50	24.00	2.26	---	6.13	592.69	1881.5	
XSECTION 32	REACH	.31	7	2	.05	.0	4.50	24.00	2.26	---	6.13	592.69	1881.5	
XSECTION 32	RUNOFF	.17	7	2	.05	.0	4.50	24.00	2.10	---	6.09	308.64	1826.3	
XSECTION 32	ADDHYD	.48	7	2	.05	.0	4.50	24.00	2.20	---	6.11	896.12	1851.5	
XSECTION 33	REACH	1.12	7	2	.05	.0	4.50	24.00	1.85	---	6.33	1427.24	1274.3	
XSECTION 33	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.69	---	6.07	365.17	2340.8	
XSECTION 33	ADDHYD	1.28	7	2	.05	.0	4.50	24.00	1.95	---	6.29	1593.99	1249.2	
XSECTION 33	REACH	.16	7	2	.05	.0	4.50	24.00	1.86	---	6.17	241.71	1549.4	

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION	33	REACH	.48	7	2	.05	.0	4.50	24.00	2.20	---	6.16	893.03	1845.1
XSECTION	33	ADDHYD	1.43	7	2	.05	.0	4.50	24.00	1.94	---	6.27	1793.29	1252.3
XSECTION	33	ADDHYD	1.92	7	2	.05	.0	4.50	24.00	2.01	---	6.22	2620.09	1367.5
STRUCTURE	33	RESVOR	1.92	7	2	.05	.0	4.50	24.00	2.00	6118.07	6.34	2347.33	1225.1
XSECTION	34	REACH	1.92	7	2	.05	.0	4.50	24.00	1.99	---	6.42	2255.05	1177.0
XSECTION	34	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.17	180.15	1305.4
XSECTION	34	ADDHYD	2.05	7	2	.05	.0	4.50	24.00	1.98	---	6.41	2356.82	1147.4
XSECTION	34	ADDHYD	2.20	7	2	.05	.0	4.50	24.00	1.96	---	6.41	2488.14	1128.9
XSECTION	35	REACH	2.20	7	2	.05	.0	4.50	24.00	1.96	---	6.41	2488.14	1128.9
XSECTION	35	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.14	202.54	1457.1
XSECTION	35	ADDHYD	2.34	7	2	.05	.0	4.50	24.00	1.95	---	6.41	2582.21	1102.1
XSECTION	36	REACH	2.34	7	2	.05	.0	4.50	24.00	1.95	---	6.41	2582.21	1102.1
XSECTION	36	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.26	---	6.14	216.15	1771.7
XSECTION	36	ADDHYD	2.46	7	2	.05	.0	4.50	24.00	1.97	---	6.40	2688.23	1090.6
XSECTION	37	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.02	---	6.10	218.76	1709.0
XSECTION	38	RUNOFF	.19	7	2	.05	.0	4.50	24.00	1.86	---	6.29	206.02	1107.7
XSECTION	39	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.93	---	6.21	199.94	1315.4
XSECTION	40	REACH	.15	7	2	.05	.0	4.50	24.00	1.93	---	6.32	187.31	1232.3
XSECTION	40	RUNOFF	.17	7	2	.05	.0	4.50	24.00	1.72	---	6.11	243.96	1418.4
XSECTION	40	ADDHYD	.32	7	2	.05	.0	4.50	24.00	1.82	---	6.17	383.64	1184.1
XSECTION	40	REACH	2.46	7	2	.05	.0	4.50	24.00	1.96	---	6.52	2512.93	1019.4
XSECTION	40	REACH	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.18	209.26	1634.8
XSECTION	40	REACH	.19	7	2	.05	.0	4.50	24.00	1.85	---	6.35	204.40	1098.9
XSECTION	40	ADDHYD	.45	7	2	.05	.0	4.50	24.00	1.87	---	6.17	592.68	1311.2
XSECTION	40	ADDHYD	.64	7	2	.05	.0	4.50	24.00	1.87	---	6.21	756.46	1185.7
XSECTION	40	ADDHYD	3.10	7	2	.05	.0	4.50	24.00	1.94	---	6.49	2978.48	959.9
XSECTION	41	REACH	3.10	7	2	.05	.0	4.50	24.00	1.94	---	6.57	2928.54	943.8
XSECTION	41	RUNOFF	.15	7	2	.05	.0	4.50	24.00	1.94	---	6.18	215.21	1406.6
XSECTION	41	ADDHYD	3.26	7	2	.05	.0	4.50	24.00	1.94	---	6.56	3005.69	923.1
XSECTION	42	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.26	162.85	1154.9
XSECTION	43	REACH	.14	7	2	.05	.0	4.50	24.00	1.86	---	6.26	162.85	1154.9
XSECTION	43	RUNOFF	.13	7	2	.05	.0	4.50	24.00	1.93	---	6.32	142.52	1088.0
XSECTION	43	ADDHYD	.27	7	2	.05	.0	4.50	24.00	1.89	---	6.29	302.91	1113.6
XSECTION	44	REACH	.27	7	2	.05	.0	4.50	24.00	1.89	---	6.35	301.47	1108.3
XSECTION	44	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.79	---	6.11	136.46	1483.3
XSECTION	44	ADDHYD	.36	7	2	.05	.0	4.50	24.00	1.86	---	6.27	381.00	1046.7

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 2													
XSECTION 45	REACH	.36	7	2	.05	.0	4.50	24.00	1.86	---	6.33	379.60	1042.8
XSECTION 45	RUNOFF	.10	7	2	.05	.0	4.50	24.00	2.02	---	6.11	164.13	1641.3
XSECTION 45	ADDHYD	.46	7	2	.05	.0	4.50	24.00	1.90	---	6.24	493.97	1064.6
XSECTION 45	ADDHYD	3.72	7	2	.05	.0	4.50	24.00	1.93	---	6.55	3344.20	899.0
XSECTION 46	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.94	---	6.14	209.98	1521.6
XSECTION 47	REACH	.14	7	2	.05	.0	4.50	24.00	1.93	---	6.26	185.27	1342.6
XSECTION 47	RUNOFF	.16	7	2	.05	.0	4.50	24.00	1.79	---	6.11	229.91	1483.3
XSECTION 47	ADDHYD	.29	7	2	.05	.0	4.50	24.00	1.86	---	6.16	386.35	1318.6
XSECTION 48	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.19	189.59	1414.9
XSECTION 49	REACH	.13	7	2	.05	.0	4.50	24.00	2.01	---	6.34	163.36	1219.1
XSECTION 49	RUNOFF	.08	7	2	.05	.0	4.50	24.00	1.79	---	6.14	117.32	1413.5
XSECTION 49	ADDHYD	.22	7	2	.05	.0	4.50	24.00	1.92	---	6.24	250.80	1155.7
XSECTION 50	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.01	---	6.30	110.47	1170.6
XSECTION 51	REACH	.22	7	2	.05	.0	4.50	24.00	1.92	---	6.35	240.17	1106.8
XSECTION 51	REACH	.12	7	2	.05	.0	4.50	24.00	2.00	---	6.44	129.54	1079.5
XSECTION 51	ADDHYD	.34	7	2	.05	.0	4.50	24.00	1.95	---	6.38	365.04	1083.2
XSECTION 51	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.60	---	6.08	208.46	2217.7
XSECTION 51	ADDHYD	.43	7	2	.05	.0	4.50	24.00	2.09	---	6.25	467.68	1085.1
XSECTION 52	REACH	.43	7	2	.05	.0	4.50	24.00	2.09	---	6.38	450.99	1046.4
XSECTION 52	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.94	---	6.18	195.51	1406.6
XSECTION 52	ADDHYD	.57	7	2	.05	.0	4.50	24.00	2.05	---	6.29	606.55	1064.1
XSECTION 52	ADDHYD	.86	7	2	.05	.0	4.50	24.00	1.98	---	6.22	963.76	1116.8
XSECTION 52	REACH	3.72	7	2	.05	.0	4.50	24.00	1.93	---	6.61	3327.77	894.6
XSECTION 52	ADDHYD	4.58	7	2	.05	.0	4.50	24.00	1.94	---	6.58	3917.89	854.9
XSECTION 53	RUNOFF	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.16	188.83	1329.8
XSECTION 54	REACH	4.58	7	2	.05	.0	4.50	24.00	1.94	---	6.66	3878.71	846.3
XSECTION 54	REACH	.14	7	2	.05	.0	4.50	24.00	1.79	---	6.16	188.83	1329.8
XSECTION 54	RUNOFF	.17	7	2	.05	.0	4.50	24.00	2.09	---	6.15	264.31	1582.7
XSECTION 54	ADDHYD	.31	7	2	.05	.0	4.50	24.00	1.95	---	6.16	453.02	1466.1
XSECTION 54	ADDHYD	4.89	7	2	.05	.0	4.50	24.00	1.94	---	6.65	3991.94	816.0
XSECTION 55	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.97	---	6.19	252.01	2048.9
XSECTION 55	ADDHYD	5.02	7	2	.05	.0	4.50	24.00	1.96	---	6.64	4080.67	813.7
XSECTION 56	REACH	5.02	7	2	.05	.0	4.50	24.00	1.96	---	6.69	4076.01	812.8
XSECTION 56	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.43	---	6.09	324.65	2041.8
XSECTION 56	ADDHYD	5.17	7	2	.05	.0	4.50	24.00	1.98	---	6.69	4121.90	796.7
XSECTION 57	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.12	275.48	1743.5

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 (A STAR(*) AFTER THE PEAK DISCHARGE TIME AND RATE (CFS) VALUES INDICATES A FLAT TOP HYDROGRAPH
 A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION	58	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.10	---	6.09	193.59	1826.3
XSECTION	59	REACH	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.12	275.48	1743.5
XSECTION	59	REACH	.11	7	2	.05	.0	4.50	24.00	2.09	---	6.16	187.39	1757.8
XSECTION	59	ADDHYD	.26	7	2	.05	.0	4.50	24.00	2.14	---	6.14	460.94	1746.0
XSECTION	59	RUNOFF	.11	7	2	.05	.0	4.50	24.00	1.87	---	6.08	193.27	1695.4
XSECTION	59	ADDHYD	.38	7	2	.05	.0	4.50	24.00	2.06	---	6.12	644.88	1706.0
XSECTION	60	REACH	.38	7	2	.05	.0	4.50	24.00	2.06	---	6.12	644.88	1706.0
XSECTION	60	RUNOFF	.12	7	2	.05	.0	4.50	24.00	1.87	---	6.08	194.27	1660.4
XSECTION	60	ADDHYD	.50	7	2	.05	.0	4.50	24.00	2.01	---	6.11	836.31	1689.5
XSECTION	61	REACH	.50	7	2	.05	.0	4.50	24.00	2.01	---	6.11	836.31	1689.5
XSECTION	61	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.52	---	6.09	278.54	2142.6
XSECTION	61	ADDHYD	.63	7	2	.05	.0	4.50	24.00	2.12	---	6.10	1113.33	1781.3
XSECTION	62	RUNOFF	.18	7	2	.05	.0	4.50	24.00	2.79	---	6.03	479.28	2692.6
XSECTION	63	REACH	.18	7	2	.05	.0	4.50	24.00	2.79	---	6.03	479.28	2692.6
XSECTION	63	RUNOFF	.13	7	2	.05	.0	4.50	24.00	2.98	---	6.08	326.69	2493.8
XSECTION	63	ADDHYD	.31	7	2	.05	.0	4.50	24.00	2.87	---	6.04	799.70	2588.0
XSECTION	63	ADDHYD	.93	7	2	.05	.0	4.50	24.00	2.37	---	6.08	1887.14	2020.5
XSECTION	64	REACH	.93	7	2	.05	.0	4.50	24.00	2.36	---	6.13	1878.67	2011.4
XSECTION	64	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.60	---	6.13	217.95	2056.2
XSECTION	64	ADDHYD	1.04	7	2	.05	.0	4.50	24.00	2.39	---	6.13	2096.61	2016.0
XSECTION	65	REACH	1.04	7	2	.05	.0	4.50	24.00	2.39	---	6.19	2076.26	1996.4
XSECTION	65	RUNOFF	.09	7	2	.05	.0	4.50	24.00	1.94	---	6.08	162.63	1730.1
XSECTION	65	ADDHYD	1.13	7	2	.05	.0	4.50	24.00	2.35	---	6.18	2208.32	1947.4
XSECTION	66	RUNOFF	.12	7	2	.05	.0	4.50	24.00	2.98	---	6.08	289.28	2493.8
XSECTION	66	ADDHYD	1.25	7	2	.05	.0	4.50	24.00	2.41	---	6.17	2458.57	1966.9
XSECTION	67	REACH	1.25	7	2	.05	.0	4.50	24.00	2.40	---	6.24	2416.33	1933.1
XSECTION	67	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.02	---	6.10	276.33	1684.9
XSECTION	67	ADDHYD	1.41	7	2	.05	.0	4.50	24.00	2.36	---	6.23	2630.16	1860.1
XSECTION	68	RUNOFF	.11	7	2	.05	.0	4.50	24.00	3.18	---	6.03	320.32	2938.7
XSECTION	68	ADDHYD	1.52	7	2	.05	.0	4.50	24.00	2.42	---	6.21	2783.62	1827.7
XSECTION	68	ADDHYD	6.70	7	2	.05	.0	4.50	24.00	2.08	---	6.30	5849.81	973.5
XSECTION	69	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.43	---	6.10	211.28	1993.2
XSECTION	70	REACH	.11	7	2	.05	.0	4.50	24.00	2.42	---	6.18	204.41	1928.4
XSECTION	70	RUNOFF	.16	7	2	.05	.0	4.50	24.00	2.18	---	6.09	309.37	1898.0
XSECTION	70	ADDHYD	.27	7	2	.05	.0	4.50	24.00	2.27	---	6.11	498.36	1852.6
XSECTION	71	REACH	.27	7	2	.05	.0	4.50	24.00	2.27	---	6.23	454.59	1689.9

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 2														
XSECTION 71	RUNOFF	.15	7	2	.05	.0	4.50	24.00	2.97	---	6.13	337.87	2252.5	
XSECTION 71	ADDHYD	.42	7	2	.05	.0	4.50	24.00	2.52	---	6.19	775.23	1850.2	
XSECTION 71	REACH	6.70	7	2	.05	.0	4.50	24.00	2.08	---	6.30	5849.81	873.5	
XSECTION 71	ADDHYD	7.12	7	2	.05	.0	4.50	24.00	2.10	---	6.28	6548.83	920.3	
XSECTION 72	REACH	7.12	7	2	.05	.0	4.50	24.00	2.10	---	6.36	6477.95	910.3	
XSECTION 72	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.79	---	6.06	281.48	2469.1	
XSECTION 72	ADDHYD	7.23	7	2	.05	.0	4.50	24.00	2.11	---	6.35	6568.52	908.5	
XSECTION 73	RUNOFF	.15	7	2	.05	.0	4.50	24.00	3.28	---	6.03	151.45	3009.7	
XSECTION 74	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.70	---	6.05	283.41	2486.0	
XSECTION 74	ADDHYD	.26	7	2	.05	.0	4.50	24.00	3.03	---	6.03	733.54	2778.5	
XSECTION 74	REACH	7.23	7	2	.05	.0	4.50	24.00	2.11	---	6.41	6533.50	903.7	
XSECTION 74	ADDHYD	7.49	7	2	.05	.0	4.50	24.00	2.14	---	6.41	6662.81	889.1	
XSECTION 75	RUNOFF	.11	7	2	.05	.0	4.50	24.00	2.26	---	6.10	214.26	1896.1	
XSECTION 76	RUNOFF	.09	7	2	.05	.0	4.50	24.00	2.43	---	6.12	166.10	1931.4	
XSECTION 76	ADDHYD	.20	7	2	.05	.0	4.50	24.00	2.33	---	6.11	379.56	1907.4	
XSECTION 76	REACH	7.49	7	2	.05	.0	4.50	24.00	2.14	---	6.47	6627.70	884.4	
XSECTION 76	ADDHYD	7.69	7	2	.05	.0	4.50	24.00	2.14	---	6.47	6744.12	876.7	
XSECTION 77	REACH	7.69	7	2	.05	.0	4.50	24.00	2.14	---	6.53	6720.93	873.6	
XSECTION 77	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.52	---	6.09	302.10	2142.6	
XSECTION 77	ADDHYD	7.83	7	2	.05	.0	4.50	24.00	2.15	---	6.52	6786.57	866.3	
XSECTION 78	REACH	7.83	7	2	.05	.0	4.50	24.00	2.14	---	6.62	6663.52	850.6	
XSECTION 78	RUNOFF	.14	7	2	.05	.0	4.50	24.00	2.51	---	6.19	238.76	1755.6	
XSECTION 78	ADDHYD	7.97	7	2	.05	.0	4.50	24.00	2.15	---	6.61	6749.28	846.8	

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS					PEAK				
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	Q AND A EQUATION		LENGTH FACTOR	PEAK RATIO Q/I	S/D @PEAK (K)	ATT- KIN COEFF (C)	TRAVEL TIME	
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)					COEFF (X)	POWER (M)					(K*)	(Q*)
ALTERNATE		1	STORM	1															
21	2300	95	6.2	90	6.3	146	6.2	0	.83	.05	1	3.07	1.33	.050	.941	240	.55	.10	.07
23	3100	95	6.1	78	6.3	178	6.2	0	.88	.05	1	1.59	1.33	.155	.818	532	.29	.15	.15
23	3700	70	6.1	69	6.2	---	---	0	.98	.05	1	9.64	1.34	.041	.977	173	.68?	.05	.05
25	2350	69	6.1	57	6.3	137	6.2	0	.88	.05	1	1.33	1.33	.142	.833	499	.31	.15	.14
26	1800	72	6.1	69	6.2	---	---	0	.88	.05	1	2.52	1.33	.052	.954	234	.56	.10	.07
27	1750	388	6.2	381	6.3	503	6.3	0	.90	.05	1	.750	1.53	.022	.981	175	.68?	.05	.05
28	3100	137	6.2	123	6.3	196	6.2	0	.93	.05	1	2.47	1.33	.083	.899	382	.38	.15	.11
28	2250	503	6.3	495	6.3	---	---	0	.89	.05	1	2.52	1.33	.030	.984	180	.67	.05	.05
31	2000	177	6.1	176	6.2	313	6.2	0	1.34	.05	1	4.55	1.40	.018	.995	110	.90?	.05	.03
32	1700	313	6.2	313	6.2	465	6.2	0	1.21	.05	0	3.18	1.46	.011	1.000	86	1.00?	.00	.00
33	2900	661	6.3	630	6.4	708	6.3	0	.92	.05	1	1.75	1.33	.050	.953	286	.48	.10	.08
33	1200	118	6.1	115	6.2	---	---	0	.93	.05	1	.880	1.49	.030	.973	183	.66	.10	.05
33	1300	465	6.2	463	6.2	---	---	0	1.17	.05	1	.980	1.46	.019	.996	130	.82?	.05	.04
34	2450	842	6.5	803	6.6	831	6.6	0	1.03	.05	1	.670	1.44	.024	.953	287	.48	.10	.08
35	1250	881	6.6	881	6.6	908	6.6	0	1.00	.05	0	2.47	1.51	.001	1.000	46	1.00?	.00	.00
36	700	908	6.6	906	6.7	933	6.7	0	1.00	.05	1	.210	1.52	.005	.992	125	.84?	.05	.03
40	1800	96	6.3	88	6.3	173	6.2	0	.98	.05	1	1.13	1.33	.078	.915	398	.37	.10	.11
40	2650	933	6.7	867	6.8	---	---	0	1.01	.05	1	.210	1.52	.038	.930	469	.32	.15	.13
40	1050	110	6.1	101	6.2	---	---	0	1.04	.05	1	.220	1.59	.059	.923	299	.46	.10	.08
40	650	97	6.3	95	6.4	---	---	0	.92	.05	1	.220	1.59	.016	.982	194	.63	.10	.05
41	1700	997	6.8	979	6.8	999	6.8	0	.99	.05	1	.200	1.52	.016	.982	304	.46	.10	.08
43	500	76	6.3	76	6.3	143	6.3	0	.92	.05	0	1.27	1.42	.002	1.000	35	1.00?	.00	.00
44	2750	143	6.3	141	6.4	176	6.3	0	.95	.05	1	3.97	1.44	.016	.987	161	.72?	.10	.04
45	2800	176	6.3	174	6.3	226	6.3	0	.93	.05	1	3.97	1.44	.013	.991	154	.74?	.05	.04
47	4050	103	6.2	86	6.3	177	6.2	0	.98	.05	1	2.26	1.33	.139	.836	523	.29	.15	.15
49	3600	93	6.2	76	6.4	114	6.3	0	1.03	.05	1	1.51	1.33	.157	.816	644	.25	.20	.18
51	2100	114	6.3	108	6.4	---	---	0	.97	.05	1	1.51	1.33	.054	.942	357	.40	.15	.10
51	2600	68	6.3	61	6.5	---	---	0	1.03	.05	1	1.43	1.33	.092	.897	524	.29	.20	.15
52	2700	219	6.3	208	6.4	283	6.3	0	1.09	.05	1	1.51	1.33	.049	.954	391	.37	.15	.11
52	1250	1100	6.8	1094	6.8	---	---	0	.98	.05	1	.210	1.52	.008	.994	209	.60	.05	.06
54	1800	1355	6.5	1330	6.6	---	---	0	.99	.05	1	.190	1.52	.013	.982	300	.46	.15	.08
54	650	88	6.2	88	6.2	220	6.2	0	.87	.05	0	3.19	1.33	.008	1.000	67	1.00?	.00	.00

SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS

(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS. SEE PREVIOUS WARNINGS)

HYDROGRAPH INFORMATION									ROUTING PARAMETERS							PEAK			
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	Q AND A EQUATION		PEAK RATIO Q/I	S/Q @PEAK (K)	ATT- KIN COEFF (C)	TRAVEL TIME		
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)					LENGTH FACTOR	POWER FACTOR				STOR- AGE (HR)	KINE- MATIC (HR)	
ALTERNATE 1 STORM 1																			
56	1900	1482	6.5	1476	6.6	1514	6.6	0	1.00	.05	1	.480	1.53	.005	.996	160	.722	.10	.04
59	1350	143	6.2	143	6.2	---	---	0	1.15	.05	0	5.05	1.42	.008	1.000	70	1.007	.00	.00
59	1900	100	6.1	94	6.2	---	---	0	1.09	.05	1	2.42	1.33	.057	.944	235	.55	.10	.07
60	1200	323	6.2	323	6.2	413	6.1	0	1.07	.05	0	3.31	1.42	.008	1.000	66	1.007	.00	.00
61	1800	413	6.1	413	6.1	568	6.1	0	1.03	.05	0	4.35	1.44	.008	1.000	71	1.007	.00	.00
ALTERNATE 1 STORM 2																			
63	1400	284	6.1	284	6.1	476	6.1	0	1.63	.05	0	6.43	1.40	.008	1.000	53	1.007	.00	.00
64	1250	1025	6.1	1017	6.2	1140	6.2	0	1.30	.05	1	1.43	1.33	.025	.993	129	.822	.05	.04
65	1600	1140	6.2	1118	6.2	1183	6.2	0	1.32	.05	1	1.51	1.33	.031	.981	154	.742	.05	.04
67	4300	1329	6.2	1281	6.3	1386	6.3	0	1.34	.05	1	1.29	1.51	.036	.964	212	.60	.05	.06
70	1500	115	6.1	109	6.2	258	6.2	0	1.34	.05	1	.670	1.50	.053	.948	269	.50	.10	.08
ALTERNATE 1 STORM 3																			
71	2950	258	6.2	228	6.3	415	6.2	0	1.22	.05	1	1.42	1.33	.112	.883	429	.35	.10	.12
71	650	2664	6.3	2664	6.3	---	---	0	1.09	.05	0	.790	1.33	.005	1.000	82	1.007	.00	.00
72	1300	3045	6.3	2977	6.4	3023	6.3	0	1.11	.05	1	.140	1.50	.013	.978	222	.58	.10	.06
74	1500	3023	6.3	3000	6.5	---	---	0	1.11	.05	1	.220	1.51	.009	.992	181	.66	.10	.05
76	1450	3072	6.5	3036	6.5	---	---	0	1.14	.05	1	.200	1.51	.009	.988	185	.65	.05	.05
ALTERNATE 1 STORM 4																			
77	1050	3096	6.5	3075	6.6	3106	6.6	0	1.14	.05	1	.160	1.50	.007	.993	163	.717	.10	.05
78	2450	3106	6.6	3025	6.7	3065	6.7	0	1.14	.05	1	.190	1.51	.019	.974	322	.44	.10	.09
ALTERNATE 2 STORM 1																			
21	2300	205	6.1	201	6.2	324	6.2	0	1.72	.05	1	3.07	1.33	.041	.977	199	.62	.10	.06
23	3100	202	6.1	174	6.2	384	6.2	0	1.79	.05	1	1.59	1.33	.127	.861	441	.34	.10	.12
23	3700	140	6.1	138	6.2	---	---	0	1.94	.05	1	9.64	1.34	.033	.983	145	.772	.10	.04
25	2350	146	6.1	128	6.2	294	6.2	0	1.79	.05	1	1.33	1.33	.117	.874	414	.36	.10	.12
26	1800	154	6.1	148	6.2	---	---	0	1.79	.05	1	2.52	1.33	.043	.962	194	.63	.10	.05
ALTERNATE 2 STORM 2																			
27	1750	840	6.2	827	6.2	1112	6.2	0	1.83	.05	1	.750	1.53	.016	.985	134	.802	.05	.04
28	3400	294	6.2	274	6.3	421	6.2	0	1.87	.05	1	2.47	1.33	.071	.931	316	.44	.10	.09
28	2250	1112	6.2	1096	6.3	---	---	0	1.81	.05	1	2.52	1.33	.026	.985	148	.762	.05	.04
31	2000	322	6.1	322	6.2	588	6.2	0	2.43	.05	1	4.55	1.40	.014	1.000	93	.982	.05	.03
32	1700	588	6.2	588	6.2	895	6.1	0	2.26	.05	0	3.18	1.46	.008	1.000	71	1.007	.00	.00
ALTERNATE 2 STORM 3																			
33	2900	1475	6.3	1421	6.3	1593	6.3	0	1.85	.05	1	1.75	1.33	.044	.963	234	.56	.10	.07
33	1200	245	6.1	241	6.2	---	---	0	1.87	.05	1	.880	1.49	.022	.982	144	.772	.05	.04
33	1300	895	6.1	890	6.2	---	---	0	2.20	.05	1	.980	1.46	.015	.995	106	.922	.05	.03
34	2450	2345	6.3	2242	6.4	2350	6.4	0	2.00	.05	1	.670	1.44	.026	.956	210	.60	.05	.06

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

HYDROGRAPH INFORMATION									ROUTING PARAMETERS							PEAK		
XSEC REACH		INFLOW		OUTFLOW		OUTFLOW+ INTERV.AREA		BASE- FLOW	VOLUME ABOVE BASE	MAIN TIME INCR	ITER- ATION #	Q AND A EQUATION		PEAK RATIO Q/I	S/S @PEAK (K)	ATT- KIN COEFF (C)	TRAVEL STOR- AGE (HR)	PEAK TIME KINE- MATIC (HR)
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)					LENGTH (K*)	POWER FACTOR					
ALTERNATE		1	STORM	2														
35	1250	2482	6.4	2482	6.4	2580	6.4	0	1.96	.05	0	2.47	1.51	.001	1.000	32	1.00?	.00 .00
36	700	2580	6.4	2580	6.4	2688	6.4	0	1.95	.05	0	.210	1.52	.005	1.000	88	1.00?	.00 .00
40	1900	200	6.2	187	6.3	382	6.2	0	1.93	.05	1	1.13	1.33	.066	.935	332	.43	.10 .09
40	2650	2688	6.4	2506	6.5	---	---	0	1.97	.05	1	.210	1.52	.039	.932	327	.43	.10 .09
40	1050	219	6.1	208	6.2	---	---	0	2.02	.05	1	.220	1.59	.041	.952	232	.56	.10 .06
40	650	206	6.3	204	6.3	---	---	0	1.86	.05	1	.220	1.59	.011	.993	147	.76?	.05 .04
41	1700	2975	6.5	2920	6.6	3002	6.6	0	1.94	.05	1	.200	1.52	.017	.982	209	.60	.05 .06
43	500	163	6.3	163	6.3	303	6.3	0	1.86	.05	0	1.27	1.42	.002	1.000	28	1.00?	.00 .00
44	2750	303	6.3	301	6.3	380	6.3	0	1.89	.05	1	3.97	1.44	.012	.996	128	.83?	.05 .04
45	2800	380	6.3	378	6.3	494	6.3	0	1.86	.05	1	3.97	1.44	.010	.995	122	.85?	.10 .03
47	4050	209	6.2	185	6.3	386	6.2	0	1.94	.05	1	2.26	1.33	.115	.883	438	.34	.10 .12
49	3600	189	6.2	163	6.3	251	6.3	0	2.01	.05	1	1.51	1.33	.131	.862	540	.29	.15 .15
51	2100	251	6.3	240	6.3	---	---	0	1.92	.05	1	1.51	1.33	.047	.959	294	.47	.10 .08
51	2600	140	6.3	130	6.5	---	---	0	2.01	.05	1	1.43	1.33	.078	.922	438	.34	.15 .12
52	2700	468	6.3	450	6.4	606	6.3	0	2.09	.05	1	1.51	1.33	.044	.963	324	.43	.15 .09
52	1250	3344	6.6	3326	6.6	---	---	0	1.93	.05	1	.210	1.52	.009	.995	143	.77?	.05 .04
54	1800	3911	6.6	3878	6.7	---	---	0	1.94	.05	1	.190	1.52	.014	.992	208	.60	.05 .06
54	650	189	6.2	189	6.2	453	6.2	0	1.79	.05	0	3.19	1.33	.007	1.000	56	1.00?	.00 .00
56	1900	4079	6.7	4076	6.7	4121	6.7	0	1.96	.05	1	.480	1.53	.005	.999	113	.89?	.05 .03
59	1350	273	6.1	273	6.1	---	---	0	2.18	.05	0	5.05	1.42	.006	1.000	58	1.00?	.00 .00
59	1900	193	6.1	187	6.2	---	---	0	2.10	.05	1	2.42	1.33	.046	.969	199	.62	.05 .06
60	1200	642	6.1	642	6.1	836	6.1	0	2.06	.05	0	3.31	1.42	.006	1.000	54	1.00?	.00 .00
61	1800	836	6.1	836	6.1	1113	6.1	0	2.01	.05	0	4.35	1.44	.006	1.000	58	1.00?	.00 .00
63	1400	475	6.1	475	6.1	799	6.1	0	2.79	.05	0	6.43	1.40	.006	1.000	45	1.00?	.00 .00
64	1250	1870	6.1	1867	6.2	2084	6.2	0	2.37	.05	1	1.43	1.33	.020	.999	111	.90?	.05 .03
65	1600	2084	6.2	2073	6.2	2198	6.2	0	2.39	.05	1	1.51	1.33	.026	.995	132	.81?	.05 .04
67	4300	2445	6.2	2414	6.3	2616	6.3	0	2.41	.05	1	1.29	1.51	.027	.987	173	.69?	.10 .05
70	1500	211	6.1	204	6.2	497	6.1	0	2.43	.05	1	.670	1.50	.040	.964	219	.58	.10 .06
71	2950	497	6.1	452	6.3	774	6.2	0	2.27	.05	1	1.42	1.33	.095	.909	365	.40	.15 .10
71	650	5850	6.3	5850	6.3	---	---	0	2.08	.05	0	.790	1.33	.004	1.000	68	1.00?	.00 .00
72	1300	6537	6.3	6476	6.3	6568	6.3	0	2.10	.05	1	.140	1.50	.011	.991	172	.69?	.05 .05
74	1500	6568	6.3	6525	6.4	---	---	0	2.11	.05	1	.220	1.51	.007	.993	139	.79?	.05 .04

TR20 XEB 8/ 2/93 9:21
REV PC/09/93

SHOOKS RUN 90-909 TYPE IIA DIST. FUT. COND.-VAN BUREN DIVERSION 20
PASS 1=10-YEAR 24-HOUR PASS 2=100-YEAR 24-HOUR SHKFU-3 30

JOB 1 SUMMARY
PAGE 22

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

XSECTION/ STRUCTURE	DRAINAGE AREA	STORM NUMBERS.....	
ID	(SQ MI)	1	2
STRUCTURE 33	1.92		
ALTERNATE 1		842.58	2347.33
XSECTION 18	.15		
ALTERNATE 1		58.95	132.00
XSECTION 19	.08		
ALTERNATE 1		70.79	141.09
XSECTION 20	.15		
ALTERNATE 1		95.42	206.92
XSECTION 21	.24		
ALTERNATE 1		146.88	324.10
XSECTION 22	.13		
ALTERNATE 1		95.53	201.77
XSECTION 23	.60		
ALTERNATE 1		389.81	841.37
XSECTION 24	.10		
ALTERNATE 1		69.16	146.06
XSECTION 25	.21		
ALTERNATE 1		136.96	294.19
XSECTION 26	.10		
ALTERNATE 1		68.84	148.68
XSECTION 27	.81		
ALTERNATE 1		506.49	1112.52
XSECTION 28	1.12		
ALTERNATE 1		663.51	1476.22
XSECTION 29	.16		
ALTERNATE 1		118.58	245.29
XSECTION 30	.16		
ALTERNATE 1		176.87	322.63

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
XSECTION 31	.31		
ALTERNATE 1		313.62	992.69
XSECTION 32	.48		
ALTERNATE 1		168.62	896.12
XSECTION 33	1.92		
ALTERNATE 1		1222.30	2620.09
XSECTION 34	2.20		
ALTERNATE 1		881.97	2188.14
XSECTION 35	2.34		
ALTERNATE 1		909.31	2582.21
XSECTION 36	2.46		
ALTERNATE 1		933.27	2688.23
XSECTION 37	.13		
ALTERNATE 1		109.97	213.76
XSECTION 38	.19		
ALTERNATE 1		96.65	206.02
XSECTION 39	.15		
ALTERNATE 1		96.40	199.94
XSECTION 40	3.10		
ALTERNATE 1		997.27	2978.18
XSECTION 41	3.26		
ALTERNATE 1		999.85	3005.69
XSECTION 42	.14		
ALTERNATE 1		76.50	162.85
XSECTION 43	.27		
ALTERNATE 1		143.39	302.91
XSECTION 44	.36		
ALTERNATE 1		175.76	381.00

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

XSECTION/ STRUCTURE ID	DRAINAGE AREA (SQ MI)	STORM NUMBERS.....	
		1	2
XSECTION 15	3.72		
ALTERNATE 1		1099.89	3344.20
XSECTION 46	.14		
ALTERNATE 1		102.72	209.92
XSECTION 47	.29		
ALTERNATE 1		177.18	386.35
XSECTION 48	.13		
ALTERNATE 1		93.53	189.59
XSECTION 49	.22		
ALTERNATE 1		114.71	250.80
XSECTION 50	.12		
ALTERNATE 1		68.51	140.47
XSECTION 51	.43		
ALTERNATE 1		218.59	467.68
XSECTION 52	1.58		
ALTERNATE 1		1355.12	3917.89
XSECTION 53	.14		
ALTERNATE 1		87.98	198.83
XSECTION 54	4.89		
ALTERNATE 1		1405.06	3991.94
XSECTION 55	5.02		
ALTERNATE 1		1482.21	4080.67
XSECTION 56	5.17		
ALTERNATE 1		1514.48	4121.90
XSECTION 57	.16		
ALTERNATE 1		142.80	275.48
XSECTION 58	.11		
ALTERNATE 1		99.51	193.59

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
XSECTION 59	.38		
ALTERNATE 1		323.80	644.88
XSECTION 60	.50		
ALTERNATE 1		416.74	836.31
XSECTION 61	.63		
ALTERNATE 1		570.66	1113.33
XSECTION 62	.18		
ALTERNATE 1		284.94	479.28
XSECTION 63	.93		
ALTERNATE 1		1028.60	1887.14
XSECTION 64	1.04		
ALTERNATE 1		1140.29	2096.61
XSECTION 65	1.13		
ALTERNATE 1		1183.13	2208.32
XSECTION 66	1.25		
ALTERNATE 1		1330.57	2458.57
XSECTION 67	1.41		
ALTERNATE 1		1387.14	2630.16
XSECTION 68	6.70		
ALTERNATE 1		2665.68	5849.81
XSECTION 69	.11		
ALTERNATE 1		115.35	211.28
XSECTION 70	.27		
ALTERNATE 1		259.62	498.36
XSECTION 71	7.12		
ALTERNATE 1		3046.11	6548.83
XSECTION 72	7.23		
ALTERNATE 1		3033.88	6568.52

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
XSECTION 73	.15		
ALTERNATE 1		296.84	451.45
XSECTION 74	7.12		
ALTERNATE 1		3072.19	6662.91
XSECTION 75	.11		
ALTERNATE 1		113.43	214.26
XSECTION 76	7.69		
ALTERNATE 1		3098.61	6744.12
XSECTION 77	7.83		
ALTERNATE 1		3110.03	6786.57
XSECTION 78	7.97		
ALTERNATE 1		3066.19	6749.28

MAIN - UNEXPECTED RECORD FOUND(IGNORED) >>>

<<<

**H. TR-20 ANALYSIS
DETENTION IMPROVEMENT ALTERNATIVE**

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

JOB TR-20	SUMMARY					NO PLOTS	10
TITLE	SHOOKS RUN 90-809 TYPE IIA DIST. FUT. COND.-NEW PJGC WA 36" RCP						20
TITLE	K KIOWA/PLATTE W/3-120" RCP		PASS 1=10-YR	PASS 2=100-YR	SHKFLU-5		30
5 RAINFL 7	0.25						40
8	0.0000	0.0005	0.0015	0.0030	0.0045		50
8	0.0060	0.0080	0.0100	0.0120	0.0143		60
8	0.0165	0.0188	0.0210	0.0233	0.0255		70
8	0.0278	0.0320	0.0390	0.0460	0.0530		80
8	0.0600	0.0750	0.1000	0.4000	0.7000		90
8	0.7250	0.7500	0.7650	0.7800	0.7900		100
8	0.8000	0.8100	0.8200	0.8250	0.8300		110
8	0.8350	0.8400	0.8450	0.8500	0.8550		120
8	0.8600	0.8638	0.8675	0.8713	0.8750		130
8	0.8788	0.8825	0.8863	0.8900	0.8938		140
8	0.8975	0.9013	0.9050	0.9083	0.9115		150
8	0.9148	0.9180	0.9210	0.9240	0.9270		160
8	0.9300	0.9325	0.9350	0.9375	0.9400		170
8	0.9425	0.9450	0.9475	0.9500	0.9525		180
8	0.9550	0.9575	0.9600	0.9625	0.9650		190
8	0.9675	0.9700	0.9725	0.9750	0.9775		200
8	0.9800	0.9813	0.9825	0.9838	0.9850		210
8	0.9863	0.9875	0.9888	0.9900	0.9913		220
8	0.9925	0.9938	0.9950	0.9963	0.9975		230
8	0.9988	1.0000	1.0000	1.0000	1.0000		240
9 ENDTBL							250
2 XSECTN 17	1.0	10.1					A 10
8	30.3	0.0	0.0				A 20
8	31.0	20.0	2.3				A 30
8	32.0	60.0	6.8				A 40
8	33.0	120.0	13.6				A 50
8	34.0	200.0	22.7				A 60
8	35.0	320.0	36.3				A 70
8	36.0	450.0	51.0				A 80
8	36.5	520.0	58.9				A 90
8	37.0	580.0	65.7				A100
8	37.5	640.0	72.5				A110
8	38.0	700.0	79.3				A120
8	38.5	760.0	86.1				A130
8	39.0	800.0	88.4				A140
8	39.5	850.0	88.5				A150
8	40.0	880.0	88.6				A160
8	40.5	925.0	100.1				A170
8	41.0	1057.0	146.9				A180
8	41.5	1321.0	229.9				A190
8	42.0	1753.0	346.5				A200
8	42.5	2583.0	500.7				A210

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

9	ENDTBL				A220
2	XSECTN	18	1.0	40.1	A230
8			34.7	0.0	A240
8			35.0	3.0	A250
8			35.5	15.0	A260
8			36.0	33.0	A270
8			36.5	60.0	A280
8			37.0	78.0	A290
8			37.5	105.0	A300
8			38.0	123.0	A310
8			38.5	147.0	A320
8			39.0	165.0	A330
8			39.5	180.0	A340
8			40.0	192.0	A350
8			40.5	243.0	A360
8			41.0	460.0	A370
8			41.5	868.0	A380
8			42.0	1502.0	A390
8			42.5	2386.0	A400
9	ENDTBL				A410
3	STRUCT	33			B 10
8			6104.5	0.0	B 20
8			6106.0	30.0	B 30
8			6107.0	70.0	B 40
8			6108.0	120.0	B 50
8			6109.0	170.0	B 60
8			6110.0	210.0	B 70
8			6111.0	250.0	B 80
8			6112.0	280.0	B 90
8			6113.0	310.0	B100
8			6113.5	335.0	B110
8			6114.0	420.0	B120
8			6114.5	545.0	B130
8			6115.0	705.0	B140
8			6115.5	895.0	B150
8			6116.0	1105.0	B160
8			6116.5	1350.0	B170
8			6117.0	1615.0	B180
8			6117.5	1910.0	B190
8			6118.0	2225.0	B200
8			6118.5	3050.0	B210
9	ENDTBL				B220
3	STRUCT	36			C 10
8			6055.0	0.0	C 20
8			6057.0	20.0	C 30
8			6059.0	55.0	C 40

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

8				6061.0	90.0	93.0	C 50
8				6063.0	90.0	135.8	C 60
8				6065.0	100.0	179.4	C 70
8				6067.0	110.0	223.9	C 80
8				6069.0	115.0	269.4	C 90
8				6071.0	120.0	315.8	C100
8				6073.0	125.0	363.1	C110
9	ENDTBL						C120
3	STRUCT	68					D 10
8				5962.5	0.0	0.0	D 20
8				5964.0	150.0	0.1	D 30
8				5966.0	420.0	0.5	D 40
8				5968.0	890.0	1.5	D 50
8				5970.0	1440.0	3.9	D 60
8				5972.0	2100.0	9.2	D 70
8				5974.0	2850.0	19.3	D 80
8				5976.0	3450.0	34.8	D 90
8				5978.0	4050.0	53.8	D100
9	ENDTBL						D110
6	RUNOFF	1	1	1	0.102	73.0	0.32
6	REACH	3	2	1	500.0	0.92	1.51
6	RUNOFF	1	2	3	0.094	77.0	0.32
6	ADDHYD	4	2	2	3	1	290
6	REACH	3	3	1	2	2300.0	0.71
6	RUNOFF	1	3	3	0.169	75.0	0.45
6	ADDHYD	4	3	2	3	1	320
6	REACH	3	4	1	2	550.0	1.70
6	RUNOFF	1	4	3	0.183	75.0	0.40
6	ADDHYD	4	4	2	3	1	350
6	REACH	3	5	1	2	1800.0	1.05
6	RUNOFF	1	5	3	0.097	71.0	0.38
6	ADDHYD	4	5	2	3	1	380
6	REACH	3	6	1	2	1400.0	0.45
6	RUNOFF	1	6	3	0.116	73.0	0.52
6	ADDHYD	4	6	2	3	1	410
6	REACH	3	7	1	2	1500.0	1.59
6	RUNOFF	1	7	3	0.095	88.0	0.32
6	ADDHYD	4	7	2	3	1	440
6	RUNOFF	1	8	2	0.100	84.0	0.52
6	REACH	3	9	2	3	2400.0	1.43
6	RUNOFF	1	9	2	0.145	81.0	0.57
6	ADDHYD	4	9	3	2	4	480
6	REACH	3	10	1	2	3250.0	1.82
6	REACH	3	10	4	3	1450.0	4.35
6	ADDHYD	4	10	2	3	1	510
6	RUNOFF	1	10	2	0.144	76.0	0.42

*****90-90 LIST OF INPUT DATA (CONTINUED)*****

6	ADDHYD	4	10	1	2	3				530
6	RUNOFF	1	11			1	0.134	75.0	0.30	540
6	REACH	3	12	1		2	1150.0	2.62	1.33	550
6	RUNOFF	1	12			1	0.081	76.0	0.32	560
6	ADDHYD	4	12	2	1	1				570
6	REACH	3	13	4		1	3550.0	6.75	1.40	580
6	RUNOFF	1	13			2	0.131	76.0	0.38	590
6	ADDHYD	4	13	1	2	4				600
6	RUNOFF	1	14			2	0.122	73.0	0.40	610
6	REACH	3	15	4		1	900.0	6.04	1.42	620
6	REACH	3	15	2		1	3700.0	2.26	1.33	630
6	ADDHYD	4	15	1	4	2				640
6	RUNOFF	1	15			1	0.103	76.0	0.40	650
6	ADDHYD	4	15	2	1	4				660
6	RUNOFF	1	16			2	0.108	80.0	0.42	670
6	REACH	3	17	4		1	2300.0	1.89	1.33	680
6	REACH	3	17	2		4	2700.0	0.95	1.51	690
6	ADDHYD	4	17	1	4	2				700
6	RUNOFF	1	17			1	0.109	78.0	0.40	710
6	ADDHYD	4	17	2	1	4				720
6	ADDHYD	4	17	3	4	1				730
6	DIVERT	6	17	1	7	2		0.59	18.	740
6	REACH	3	18	2		3	3850.0	0.80	1.45	750
6	RUNOFF	1	18			2	0.150	74.0	0.80	760
6	ADDHYD	4	18	3	2	1				770
6	RUNOFF	1	19			2	0.079	77.0	0.30	780
6	RUNOFF	1	20			3	0.150	74.0	0.40	790
6	REACH	3	21	3		4	2300.0	3.07	1.33	800
6	RUNOFF	1	21			3	0.089	75.0	0.35	810
6	ADDHYD	4	21	4	3	5				820
6	RUNOFF	1	22			3	0.134	75.0	0.37	830
6	REACH	3	23	3		4	3100.0	1.59	1.33	840
6	RUNOFF	1	23			3	0.148	77.0	0.47	850
6	ADDHYD	4	23	4	3	6				860
6	REACH	3	23	2		3	3700.0	9.64	1.34	870
6	ADDHYD	4	23	6	3	2				880
6	ADDHYD	4	23	5	2	3				890
6	RUNOFF	1	24			2	0.097	75.0	0.37	900
6	REACH	3	25	2		4	2350.0	1.33	1.33	910
6	RUNOFF	1	25			2	0.111	77.0	0.38	920
6	ADDHYD	4	25	4	2	6				930
6	RUNOFF	1	26			2	0.102	75.0	0.37	940
6	REACH	3	26	2		4	1800.0	2.52	1.33	950
6	RUNOFF	1	27			2	0.108	75.0	0.35	960
6	ADDHYD	4	27	4	2	5				970
6	REACH	3	27	3		2	1750.0	0.75	1.53	980

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

6	ADDHYD	4	27	5	2	3				990
6	REACH	3	28	6		2	3400.0	2.47	1.33	1000
6	RUNOFF	1	28			4	0.103	80.0	0.30	1010
6	ADDHYD	4	28	2	4	5				1020
6	REACH	3	28	3		4	2250.0	2.52	1.33	1030
6	ADDHYD	4	29	5	4	2				1040
6	RUNOFF	1	29			3	0.156	76.0	0.37	1050
6	RUNOFF	1	30			4	0.156	83.0	0.37	1060
6	REACH	3	31	4		5	2000.0	4.55	1.40	1070
6	RUNOFF	1	31			4	0.159	79.0	0.40	1080
6	ADDHYD	4	31	5	4	6				1090
6	REACH	3	32	6		4	1700.0	3.18	1.46	1100
6	RUNOFF	1	32			5	0.169	79.0	0.35	1110
6	ADDHYD	4	32	4	5	6				1120
6	REACH	3	33	2		4	2900.0	1.75	1.33	1130
6	RUNOFF	1	33			5	0.156	86.0	0.35	1140
6	ADDHYD	4	33	4	5	2				1150
6	REACH	3	33	3		4	1200.0	0.98	1.49	1160
6	REACH	3	33	6		3	1300.0	0.98	1.46	1170
6	ADDHYD	4	33	2	4	5				1180
6	ADDHYD	4	33	3	5	2				1190
6	RESVOR	2	33	2		3	6104.5			1200
6	REACH	3	34	3		2	2450.0	0.67	1.44	1210
6	RUNOFF	1	34			3	0.138	75.0	0.48	1220
6	ADDHYD	4	34	2	3	4				1230
6	ADDHYD	4	34	1	4	2				1240
6	REACH	3	35	2		1	1250.0	2.47	1.51	1250
6	RUNOFF	1	35			2	0.139	76.0	0.43	1260
6	ADDHYD	4	35	1	2	3				1270
6	REACH	3	36	3		1	700.0	0.21	1.52	1280
6	RUNOFF	1	36			2	0.122	81.0	0.45	1290
6	ADDHYD	4	36	1	2	4				1300
6	RESVOR	2	36	4		3	6055.0			1305
6	RUNOFF	1	37			1	0.128	78.0	0.37	1310
6	RUNOFF	1	38			2	0.186	76.0	0.67	1320
6	RUNOFF	1	39			4	0.152	77.0	0.55	1330
6	REACH	3	40	4		5	1800.0	1.13	1.33	1340
6	RUNOFF	1	40			4	0.172	74.0	0.38	1350
6	ADDHYD	4	40	5	4	6				1360
6	REACH	3	40	3		4	2650.0	0.21	1.52	1370
6	REACH	3	40	1		3	1050.0	0.22	1.59	1380
6	REACH	3	40	2		5	650.0	0.22	1.59	1390
6	ADDHYD	4	40	6	3	1				1400
6	ADDHYD	4	40	5	1	3				1410
6	ADDHYD	4	40	4	3	1				1420
6	REACH	3	41	1		2	1700.0	0.20	1.52	1430

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

6 RUNOFF 1 41	1	0.153	77.0	0.50	1440
6 ADDHYD 4 41	2 1 3				1450
6 RUNOFF 1 42	1	0.141	76.0	0.63	1460
6 REACH 3 43	1 2	500.0	4.27	1.42	1470
6 RUNOFF 1 43	1	0.131	77.0	0.73	1480
6 ADDHYD 4 43	2 1 4				1490
6 REACH 3 44	1 1	2750.0	3.97	1.44	1500
6 RUNOFF 1 44	2	0.092	75.0	0.38	1510
6 ADDHYD 4 44	1 2 4				1520
6 REACH 3 45	1 1	2800.0	3.97	1.44	1530
6 RUNOFF 1 45	2	0.100	78.0	0.40	1540
6 ADDHYD 4 45	1 2 4				1550
6 ADDHYD 4 45	3 1 1				1560
6 RUNOFF 1 46	2	0.138	77.0	0.43	1570
6 REACH 3 47	2 3	4050.0	2.26	1.33	1580
6 RUNOFF 1 47	2	0.155	75.0	0.38	1590
6 ADDHYD 4 47	3 2 4				1600
6 RUNOFF 1 48	2	0.134	78.0	0.53	1610
6 REACH 3 49	2 3	3600.0	1.51	1.33	1620
6 RUNOFF 1 49	2	0.083	75.0	0.42	1630
6 ADDHYD 4 49	3 2 5				1640
6 RUNOFF 1 50	2	0.120	78.0	0.70	1650
6 REACH 3 51	5 3	2100.0	1.51	1.33	1660
6 REACH 3 51	2 5	2600.0	1.43	1.33	1670
6 ADDHYD 4 51	3 5 2				1680
6 RUNOFF 1 51	3	0.094	85.0	0.37	1690
6 ADDHYD 4 51	2 3 5				1700
6 REACH 3 52	5 2	2700.0	1.51	1.33	1710
6 RUNOFF 1 52	3	0.139	77.0	0.50	1720
6 ADDHYD 4 52	2 3 5				1730
6 ADDHYD 4 52	4 5 2				1740
6 REACH 3 52	1 3	1250.0	0.21	1.52	1750
6 ADDHYD 4 52	2 3 1				1760
6 RUNOFF 1 53	2	0.142	75.0	0.47	1770
6 REACH 3 54	1 3	1800.0	0.19	1.52	1780
6 REACH 3 54	2 1	650.0	3.19	1.33	1790
6 RUNOFF 1 54	4	0.167	79.0	0.47	1800
6 ADDHYD 4 54	1 4 2				1810
6 ADDHYD 4 54	3 2 1				1820
6 RUNOFF 1 55	2	0.123	89.0	0.58	1830
6 ADDHYD 4 55	1 2 3				1840
6 REACH 3 56	3 1	1900.0	0.48	1.53	1850
6 RUNOFF 1 56	2	0.159	83.0	0.38	1860
6 ADDHYD 4 56	1 2 3				1870
6 RUNOFF 1 57	1	0.158	80.0	0.42	1880
6 RUNOFF 1 58	2	0.106	79.0	0.35	1890

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

6 REACH	3	59	1	4	1350.0	5.05	1.42	1900
6 REACH	3	59	2	5	1900.0	2.42	1.33	1910
6 ADDHYD	4	59	4	5				1920
6 RUNOFF	1	59		2	0.114	76.0	0.32	1930
6 ADDHYD	4	59	1	2				1940
6 REACH	3	60	1	1	1200.0	3.31	1.42	1950
6 RUNOFF	1	60		2	0.117	76.0	0.33	1960
6 ADDHYD	4	60	1	2				1970
6 REACH	3	61	1	1	1800.0	4.35	1.44	1980
6 RUNOFF	1	61		2	0.130	84.0	0.37	1990
6 ADDHYD	4	61	1	2				2000
6 RUNOFF	1	62		1	0.178	87.0	0.25	2010
6 REACH	3	63	1	2	1400.0	6.43	1.40	2020
6 RUNOFF	1	63		1	0.131	89.0	0.38	2030
6 ADDHYD	4	63	2	1				2040
6 ADDHYD	4	63	4	5				2050
6 REACH	3	64	1	2	1250.0	1.43	1.33	2060
6 RUNOFF	1	64		1	0.106	85.0	0.45	2070
6 ADDHYD	4	64	2	1				2080
6 REACH	3	65	1	1	1600.0	1.51	1.33	2090
6 RUNOFF	1	65		2	0.094	77.0	0.33	2100
6 ADDHYD	4	65	1	2				2110
6 RUNOFF	1	66		1	0.116	89.0	0.38	2120
6 ADDHYD	4	66	1	4				2130
6 REACH	3	67	2	1	1300.0	1.29	1.51	2140
6 RUNOFF	1	67		2	0.164	78.0	0.38	2150
6 ADDHYD	4	67	1	2				2160
6 RUNOFF	1	68		1	0.109	91.0	0.27	2170
6 ADDHYD	4	68	1	1				2180
6 ADDHYD	4	68	3	2				2190
6 RESVOR	2	68	1	5				2195
6 RUNOFF	1	69		2	0.106	83.0	0.40	2200
6 REACH	3	70	2	3	1500.0	0.67	1.50	2210
6 RUNOFF	1	70		2	0.163	80.0	0.35	2220
6 ADDHYD	4	70	3	2				2230
6 REACH	3	71	1	2	2950.0	1.42	1.33	2240
6 RUNOFF	1	71		3	0.150	89.0	0.48	2250
6 ADDHYD	4	71	2	3				2260
6 REACH	3	71	5	2	650.0	0.79	1.33	2270
6 ADDHYD	4	71	1	2				2280
6 REACH	3	72	1	2	1300.0	0.14	1.50	2290
6 RUNOFF	1	72		1	0.114	87.0	0.33	2300
6 ADDHYD	4	72	2	1				2310
6 RUNOFF	1	73		1	0.150	92.0	0.27	2320
6 RUNOFF	1	74		2	0.114	86.0	0.30	2330
6 ADDHYD	4	74	1	2				2340

*****80-90 LIST OF INPUT DATA (CONTINUED)*****

6 REACH	3	74		3	1	1500.0	0.22	1.51									2350
6 ADDHYD	4	74		4	1	2											2360
6 RUNOFF	1	75			1		0.113	81.0	0.38								2370
6 RUNOFF	1	76			3		0.086	83.0	0.43								2380
6 ADDHYD	4	76		1	3	4											2390
6 REACH	3	76		2	1		1450.0	0.20	1.51								2400
6 ADDHYD	4	76		4	1	2											2410
6 REACH	3	77		2	1		1050.0	0.16	1.50								2420
6 RUNOFF	1	77			2		0.141	84.0	0.37								2450
6 ADDHYD	4	77		1	2	3											2460
6 REACH	3	78		3	1		2450.0	0.19	1.51								2470
6 RUNOFF	1	78			2		0.136	84.0	0.55								2480
6 ADDHYD	4	78		1	2	3											2490
ENDATA																	2500
7 INCREM	6						0.05										2510
7 COMPUT	7	001		036			0.0	3.10	1.0	7	2	01	01				2511
7 INCREM	6						0.10										2512
7 COMPUT	7		36		36		0.0	3.10	1.0	7	2	01	01				2513
7 INCREM	6						0.05										2514
7 COMPUT	7	037		039			0.0	3.10	1.0	7	2	01	01				2515
7 INCREM	6						0.10										2516
7 COMPUT	7	040		041			0.0	3.10	1.0	7	2	01	01				2517
7 INCREM	6						0.05										2518
7 COMPUT	7	042		051			0.0	3.10	1.0	7	2	01	01				2519
7 INCREM	6						0.10										2520
7 COMPUT	7	052		052			0.0	3.10	1.0	7	2	01	01				2521
7 INCREM	6						0.05										2522
7 COMPUT	7	053		078			0.0	3.10	1.0	7	2	01	01				2523
ENDCMP 1																	2530
7 INCREM	6						0.05										2540
7 COMPUT	7	001		036			0.0	4.50	1.0	7	2	01	02				2541
7 INCREM	6						0.10										2542
7 COMPUT	7		36		36		0.0	4.50	1.0	7	2	01	02				2543
7 INCREM	6						0.05										2544
7 COMPUT	7	037		039			0.0	4.50	1.0	7	2	01	02				2545
7 INCREM	6						0.10										2546
7 COMPUT	7	040		041			0.0	4.50	1.0	7	2	01	02				2547
7 INCREM	6						0.05										2548
7 COMPUT	7	042		051			0.0	4.50	1.0	7	2	01	02				2549