

**SOUTH SAND CREEK
DRAINAGE BASIN PLANNING STUDY
FOR
CANON CITY, COLORADO
TECHNICAL ADDENDUM**

PREPARED BY:

**ASSOCIATED DESIGN PROFESSIONALS, INC.
1861 AUSTIN BLUFFS PARKWAY, SUITE 101
COLORADO SPRINGS, CO 80918**

**January 6, 2000
Job No. 980907**



TECHNICAL ADDENDUM

The following information was produced in conjunction with the South Sand Creek Drainage Basin Planning Study. It contains the complete computer output for the 24-hour, 100-year, 50-year, and 25-year flow calculations for the existing conditions and developed conditions with detention.

The following is the order of listing:

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- Flow Diagram
- Developed Curve Number Calculations
- Time of Concentration Calculations
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- Soils Map
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- 24-hour, 100-year existing conditions
- 24-hour, 50-year existing conditions
- 24-hour, 25-year existing conditions

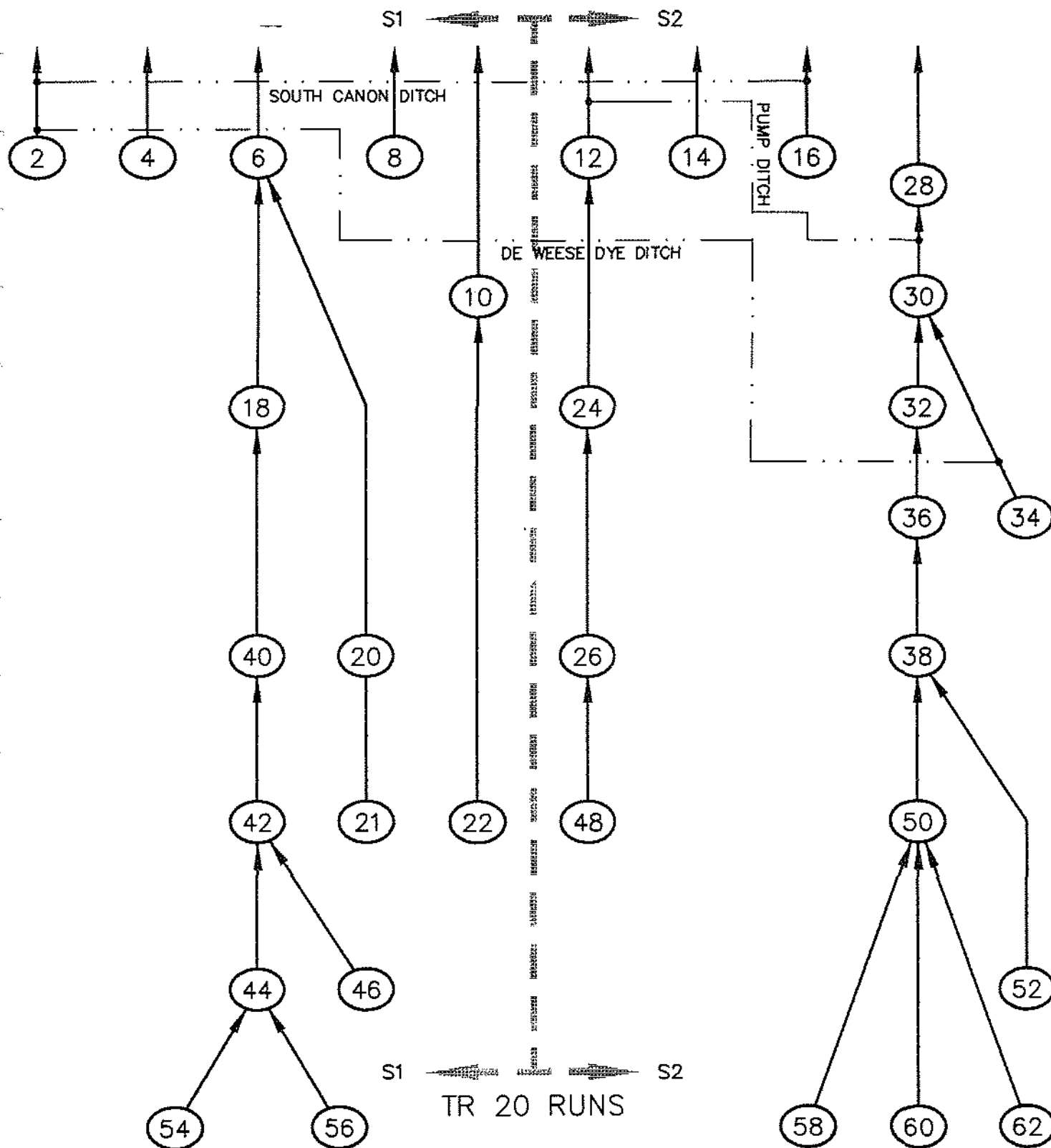
APPENDIX C – DEVELOPED CONDITIONS TR20 DATA

- 24-hour, 100-year developed conditions with detention
- 24-hour, 50-year developed conditions with detention
- 24-hour, 25-year developed conditions with detention

APPENDIX A

DESIGN CHARTS, MAPS, & TR20 INPUT CALCULATIONS

ARKANSAS RIVER



SOUTH SAND CREEK BASIN PLANNING STUDY EXISTING CONDITIONS	
FLOW DIAGRAM	
DESIGNED BY: JJW	DRAWN BY: JJW
CHECKED BY: MAB	DATE: 6/17/99
FILE NO: S_XFLOW.DWG	JOB NO: 980907



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**SOUTH SAND CREEK DBPS
DEVELOPED CN CALCULATION 1 OF 3**

BASIN #	AREA (ac.)	SOIL TYPE	AGRI	%	EST	%	S.F.	%	M.F.	%	INDST	%	COMM	%	PARK	%	FRST	%	TOTAL SOIL	DEV		BASIN #
		B	69	40	68	45	75		75		88		92		61		60		85			
2	141	C	79		79		83		83		91		94		74		73		0	70.8		2
		D	84	10	84	5	87		87		93		95		80		79		15			
		B	69	50	68	20	75		75	10	88		92		61	2	60		82			
4	344	C	79	2	79	2	83		83	5	91		94		74		73		9	71.6		4
		D	84		84	7	87		87		93		95		80	2	79		9			
		B	69		68	10	75	30	75	25	88	5	92	10	61	10	60		90			
6	291	C	79		79		83	5	83		91		94		74		73		5	76.3		6
		D	84		84		87	5	87		93		95		80		79		5			
		B	69		68		75		75		88		92	55	61		60		55			
8	160	C	79		79		83		83		91		94	45	74		73		45	92.9		8
		D	84		84		87		87		93		95		80		79		0			
		B	69	5	68		75	5	75		88	15	92	30	61	15	60		70			
10	224	C	79		79		83	5	83		91		94	5	74		73		10	83.1		10
		D	84	10	84		87	10	87		93		95		80		79		20			
		B	69		68		75	30	75	15	88		92	20	61	5	60		70			
12	421	C	79		79		83	20	83		91		94	5	74	5	73		30	80.2		12
		D	84		84		87		87		93		95		80		79		0			
		B	69		68	20	75	10	75		88		92	15	61	5	60		50			
14	487	C	79		79	5	83	25	83		91		94		74	15	73		45	77.8		14
		D	84		84		87		87		93		95		80	5	79		5			
		B	69		68	45	75	20	75		88		92		61	10	60		75			
16	192	C	79		79	5	83	5	83		91		94		74	15	73		25	70.9		16
		D	84		84		87		87		93		95		80		79		0			
		B	69	40	68	30	75		75		88		92		61	10	60		80			
18	290	C	79		79		83		83		91		94		74		73		0	71.2		18
		D	84	10	84		87		87		93	5	95		80	5	79		20			
		B	69		68	15	75		75		88	25	92	25	61	5	60		70			
20	191	C	79		79		83		83		91		94		74		73		0	84.6		20
		D	84		84	5	87		87		93	5	95	10	80	10	79		30			
		B	69	5	68	70	75		75	10	88		92	15	61		60		100			
21	262	C	79		79		83		83		91		94		74		73		0	72.4		21
		D	84		84		87		87		93		95		80		79		0			
		B	69		68	35	75		75		88	10	92		61		60		45			
22	359	C	79		79	5	83		83		91	5	94		74		73		10	79.1		22
		D	84		84	25	87	15	87		93		95		80		79	5	45			
		B	69		68		75	50	75		88		92	5	61	20	60		75			
24	310	C	79		79		83		83		91		94		74		73		0	76.1		24
		D	84		84		87	25	87		93		95		80		79		25			

**SOUTH SAND CREEK OBPS
DEVELOPED CN CALCULATION 2 OF 3**

BASIN #	AREA (ac.)	SOIL TYPE	AGRI %	EST %	S.F. %	M.F. %	INDST %	COMM %	PARK %	FRST %	TOTAL %	DEV CN	BASIN #						
26	261	B	69	10	68	10	75	75	88	15	92	61	30	60	65	74.6	26		
		C	79		79		83	83	91		94	74		73	0				
		D	84	15	84	10	87	5	87		93	95	80	5	79			35	
28	123	B	69		68	90	75	10	75		88	92	61	60	100	68.7	28		
		C	79		79		83		83		91	94	74	73	0				
		D	84		84		87		87		93	95	80	79	0				
30	175	B	69		68	40	75	25	75	35	88	92	61	60	100	72.2	30		
		C	79		79		83		83		91	94	74	73	0				
		D	84		84		87		87		93	95	80	79	0				
32	277	B	69	10	68		75	50	75		88	92	15	61	10	60	85	76.9	32
		C	79		79		83		83		91	94		74	73	0			
		D	84	15	84		87		87		93	95	80		79	15			
34	115	B	69	10	68		75	5	75	15	88	92	61	50	60	80	69.0	34	
		C	79		79		83		83		91	94	74	73	0				
		D	84	15	84		87		87		93	95	80	5	79	20			
36	118	B	69	40	68		75	30	75		88	92	61		60	70	75.3	36	
		C	79		79		83		83		91	94	74	73	0				
		D	84	30	84		87		87		93	95	80		79	30			
38	156	B	69	45	68		75		75		88	92	61	5	60	50	76.1	38	
		C	79		79		83		83		91	94	74	73	0				
		D	84	50	84		87		87		93	95	80		79	50			
40	332	B	69	5	68	95	75		75		88	92	61		60	100	68.1	40	
		C	79		79		83		83		91	94	74	73	0				
		D	84		84		87		87		93	95	80		79	0			
42	178	B	69		68	90	75		75		88	92	61		60	90	69.6	42	
		C	79		79		83		83		91	94	74	73	0				
		D	84		84	10	87		87		93	95	80		79	10			
44	85	B	69	5	68	95	75		75		88	92	61		60	100	68.1	44	
		C	79		79		83		83		91	94	74	73	0				
		D	84		84		87		87		93	95	80		79	0			
46	245	B	69	20	68	50	75		75		88	92	61		60	5	75	71.1	46
		C	79		79		83		83		91	94	74	73	0				
		D	84	10	84		87		87		93	95	80		79	15	25		
48	198	B	69		68	55	75		75		88	92	61	5	60	60	73.3	48	
		C	79		79		83		83		91	94	74	73	0				
		D	84		84	25	87		87		93	95	80		79	15			40
50	165	B	69	15	68		75		75		88	30	92	61		60	45	86.5	50
		C	79		79		83		83		91		94	74	73	0			
		D	84		84		87		87		93	45	95	80		79	10		

**SOUTH SAND CREEK DBPS
DEVELOPED CN CALCULATION 3 OF 3**

BASIN #	AREA (ac.)	SOIL TYPE	AGRI %	EST %	S.F. %	M.F. %	INDST %	COMM %	PARK %	FRST %	TOTAL %	DEV CN	BASIN #
52	860	B	69	68	75	75	88	30	92	61	30		52
		C	79	79	83	83	91	94	74	73	0	90.1	
		D	84	84	87	87	93	60	95	80	79	10	
54	389	B	69	68	20	75	75	88	92	61	60	20	54
		C	79	79	83	83	91	94	74	73	0	77.1	
		D	84	84	5	87	87	93	95	80	79	75	
56	151	B	69	68	75	75	88	92	61	60	0		56
		C	79	79	83	83	91	94	74	73	0	80.0	
		D	84	84	20	87	87	93	95	80	79	80	
58	474	B	69	10	68	10	75	75	88	92	61	30	58
		C	79	79	83	83	91	94	74	73	0	71.2	
		D	84	84	87	87	93	95	80	79	50	50	
60	427	B	69	68	75	75	88	92	61	60	30	30	60
		C	79	79	83	83	91	94	74	73	0	73.3	
		D	84	84	87	87	93	95	80	79	70	70	
62	172	B	69	68	75	75	88	92	61	60	50	50	62
		C	79	79	83	83	91	94	74	73	0	69.5	
		D	84	84	87	87	93	95	80	79	50	50	

SOUTH SAND CREEK DBPS - PROPOSED CONDITIONS
TIME OF CONCENTRATION CALCULATIONS

AREA DESIG	AREA (SQ-MI)	DEV C ₁₀ (10 yr.)	L ₁ (ft)	Initial T _{c1} Slope (%)	t ₁ (min)	L (ft)	Travel Time Slope (%)	V (fps)	T ₁ (min)	T _c (min)	T _c (hr)	EXIST CN	DEV CN	AREA DESIG
2	0.220	0.4	300	4.80	14.19	3450	4.80	6.76	8.51	22.69	0.378	70.8	70.8	2
4	0.537	0.4	300	3.46	14.78	6900	3.46	5.72	20.10	34.89	0.581	71.6	71.6	4
6	0.454	0.5	300	3.08	12.51	5200	3.08	5.39	16.08	28.59	0.477	74.6	76.3	6
8	0.250	0.9	300	2.22	4.98	3200	2.22	7.36	7.25	12.23	0.204	83.7	92.9	8
10	0.350	0.7	300	1.60	11.79	4700	1.60	5.38	14.57	26.36	0.439	79.2	83.1	10
12	0.657	0.6	300	1.86	13.39	5200	1.86	7.39	11.73	25.12	0.419	80.2	80.2	12
14	0.761	0.5	300	1.36	16.39	5600	1.36	6.16	15.16	31.55	0.526	76.1	77.8	14
16	0.300	0.4	300	2.86	15.34	3200	2.86	2.99	17.82	33.16	0.553	70.9	70.9	16
18	0.453	0.4	300	1.82	18.21	5200	1.82	3.39	25.59	43.80	0.730	72.0	71.2	18
20	0.299	0.7	300	2.22	9.52	4200	2.22	6.22	11.25	20.78	0.346	80.4	84.6	20
21	0.410	0.5	300	2.22	15.99	5200	2.22	4.29	20.19	36.18	0.603	72.6	72.4	21
22	0.561	0.5	300	2.63	14.89	9500	2.63	7.13	22.22	37.11	0.618	78.9	79.1	22
24	0.485	0.5	300	1.67	17.78	3900	1.67	5.08	12.79	30.57	0.509	72.4	76.1	24
26	0.409	0.5	300	2.78	13.41	4000	2.78	6.40	10.41	23.82	0.397	74.6	74.6	26
28	0.192	0.4	300	1.43	21.44	3900	1.43	1.65	39.34	60.78	1.013	68.7	68.7	28
30	0.274	0.5	300	1.47	18.54	3100	1.47	3.90	13.25	31.79	0.530	71.5	72.2	30
32	0.433	0.5	300	1.43	17.63	3900	1.43	4.69	13.86	31.49	0.525	73.8	76.9	32
34	0.180	0.5	300	3.20	12.85	2900	3.20	4.93	9.79	22.65	0.377	69.0	69.0	34
36	0.184	0.4	300	2.76	16.51	2700	2.76	4.12	10.92	27.43	0.457	74.4	75.3	36
38	0.244	0.4	300	1.11	21.59	2400	1.11	3.65	10.96	32.55	0.542	76.1	76.1	38
40	0.518	0.4	300	4.17	15.16	6300	4.17	6.52	16.10	31.27	0.521	69.0	68.1	40
42	0.279	0.4	300	5.45	13.70	5400	5.45	6.36	14.15	27.85	0.464	70.5	69.6	42
44	0.133	0.4	300	6.36	13.19	4100	6.36	5.59	12.22	25.41	0.423	69.0	68.1	44
46	0.382	0.3	300	7.62	12.80	6200	7.62	7.22	14.32	27.12	0.452	64.6	71.1	46
48	0.309	0.4	300	2.86	16.89	4600	2.86	2.66	28.82	45.71	0.762	73.9	73.3	48
50	0.257	0.7	300	2.21	10.66	8300	2.21	4.21	32.83	43.49	0.725	86.5	86.5	50
52	1.344	0.7	300	5.10	6.81	9700	5.10	11.88	13.60	20.41	0.340	90.1	90.1	52
54	0.608	0.2	300	13.17	11.86	5700	13.17	11.12	8.55	20.41	0.340	77.3	77.1	54
56	0.237	0.3	300	12.50	11.96	3600	12.50	8.84	6.79	18.75	0.313	80.0	80.0	56
58	0.741	0.2	300	12.14	12.58	9200	12.14	10.32	14.85	27.43	0.457	71.2	71.2	58
60	0.668	0.2	300	8.47	14.64	8200	8.47	8.33	16.41	31.05	0.518	73.3	73.3	60
62	0.268	0.2	300	5.82	16.75	5200	5.82	5.72	15.15	31.90	0.532	69.5	69.5	62

**SOUTH SAND CREEK DBPS
SUMMARY OF DISCHARGES**

SUB-BASIN	SUB-BASIN FLOWS			ACCUMULATED FLOWS			DETAINED FLOWS			SUB-BASIN
	100 YR	50 YR	25 YR	100 YR	50 YR	25 YR	100 YR	50 YR	25 YR	
2	196	163	121							2
4	375	310	230							4
6	466	396	307	1550	1336	989	1604	1374	1002	6
8	674	612	528							8
10	525	458	373	576	499	401	689	589	463	10
12	888	768	614	1146	978	766				12
14	795	679	532							14
16	208	171	126							16
18	257	212	156	1599	1290	891				18
20	539	475	392	551	483	392				20
21	291	242	179							21
22	565	484	382							22
24	474	402	311	474	402	311				24
26	432	365	280	490	410	311				26
28	71	58	41	420	374	301	560	494	377	28
30	212	176	132	700	614	460				30
32	433	369	287	518	470	361				32
34	142	116	84							34
36	184	156	120	184	156	120				36
38	232	197	152	3515	3107	2580				38
40	329	269	194	1587	1294	931				40
42	213	175	129	1528	1266	936				42
44	97	79	58	1211	1032	804				44
46	196	155	106							46
48	196	163	123							48
50	329	290	239	1182	975	721				50
52	2963	2660	2257							52
54	798	684	539							54
56	367	318	256							56
58	588	487	362							58
60	558	467	353							60
62	173	141	103							62

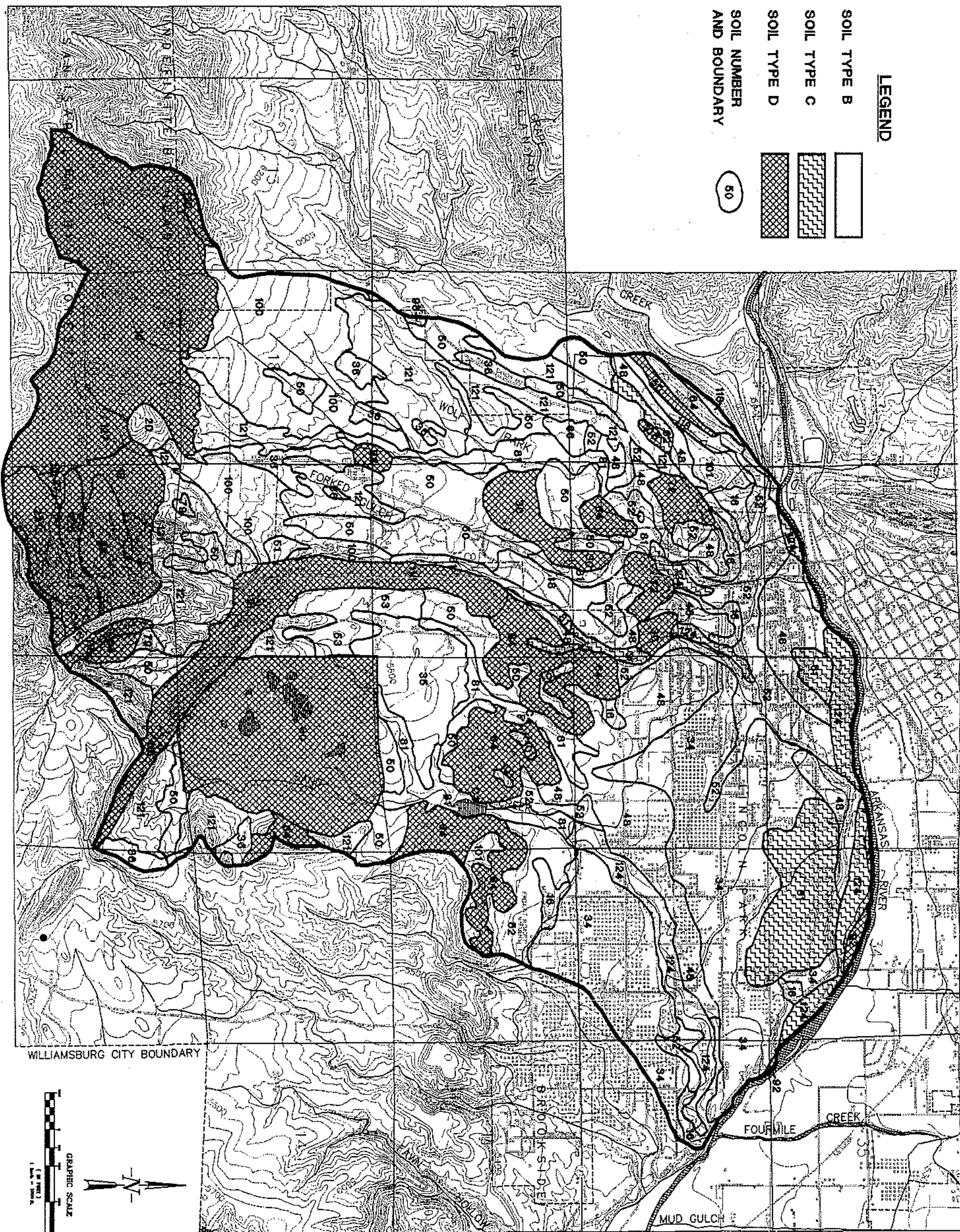
**SOUTH SAND CREEK DBPS
STRUCTURE EVALUATION**

OAK CREEK GULCH - DETENTION FACILITY / STORM SEWER UPSIZE

STR. NO.	LOCATION	ALT 1 VS. ALT (2 / 3)			EXISTING CULVERT SIZE	CAPACITY (cfs)	PROPOSED CULVERT SIZE	CAPACITY (cfs)	COST	REMARKS
		100 yr (cfs)	60 yr (cfs)	25 yr (cfs)						
29	FORGE ROAD EAST OF RR	450 / 560			48" CMP	125	6' X 10' BOX	600	\$ 38,721	LOCAL FLOWS
28	McDANIEL RD.	451 / 556	378 / 476	292 / 376	66" CMP	210	6' X 12' BOX	636	\$ 30,241	LOCAL FLOWS
27	HIGHLAND RD.	570 / 680			54" CMP	150	6' X 16' BOX	680	\$ 57,922	LOCAL FLOWS
26	RR XING N OF HIGHLAND ST.	570 / 680			3 - 36" CMP	210	6' X 14' BOX	742	\$ 37,421	LOCAL FLOWS
97	DETENTION BASIN (IN / OUT)	689 / 280	589 / 251	463 / 199	-	-	2 - 48" RCP	300	\$ 400,000	DETAINED FLOWS
24	54" STM SWR (1 / 3)	488 / 281	411 / 251	321 / 199	54" RCP	300	-	-	-	EXIST. STM SWR
24	78" STM SWR (1 / 2)	488 / 682	411 / 583	321 / 458	-	-	78" RCP	750	\$ 1,353,335	PROP. STM SWR

FORKED GULCH - DETENTION FACILITY

STR. NO.	LOCATION	ALT 1 VS. ALT 2			EXISTING CULVERT SIZE	CAPACITY (cfs)	PROPOSED CULVERT SIZE	CAPACITY (cfs)	COST	REMARKS
		100 yr (cfs)	60 yr (cfs)	25 yr (cfs)						
42	TEMPLE CANON RD. & A ST.	1284 / 1345	1117 / 1160	850 / 859	3 - 72" CMP	1275	4 - 60" CMP	1420	\$ 111,373	DETAINED FLOWS
35	PENNSYLVANIA ST.	1550 / 1605	1335 / 1372	988 / 1001	52' X 7' BRIDGE	3900	-	-	-	LOCAL FLOWS
34	CATLIN AVE. / S. CANON DITCH	1550 / 1605	1335 / 1372	988 / 1000	25' X 8' BRIDGE(S)	1750	50' X 8' BRIDGE(S)	3500	\$ 90,000	LOCAL FLOWS
33	STANLEY AVE.	1550 / 1605	1335 / 1373	989 / 1000	50' X 8' BRIDGE	4000	-	-	-	LOCAL FLOWS
32	DOUGLAS ST.	1549 / 1605	1334 / 1374	989 / 1000	38' X 9' BRIDGE	3800	-	-	-	LOCAL FLOWS
31	GRIFFIN ST.	1547 / 1602	1334 / 1373	987 / 997	50' X 11' BRIDGE	6500	-	-	-	LOCAL FLOWS

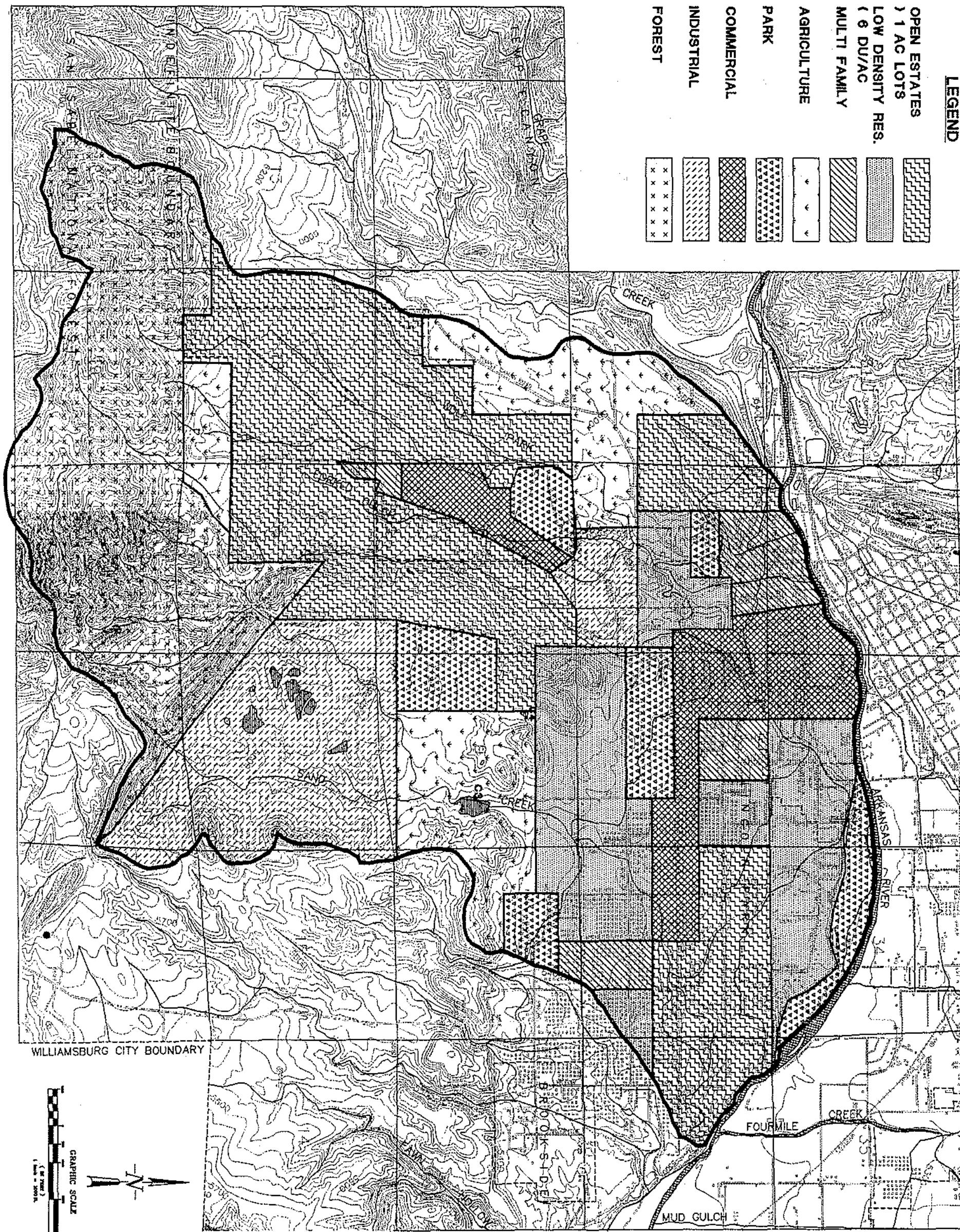


**SOUTH SAND CREEK
DRAINAGE BASIN PLANNING STUDY
CITY OF CANON CITY
SOILS MAP**

NO.	DATE	REVISION	BY



DATE: 4/2/80
JOB NO. 80077
CITY FILE NO. 80077
DRAWN BY: [blank]
CHECKED BY: [blank]
PROJECT MANAGER: [blank]
SCALE: [blank]
SHEET: 1 of 1



NO.	DATE	REVISION	BY

ADP
ANALYTICAL DRAINAGE PLANNING

DATE: 4/20/88
JOB NO.: 88001
CADD FILE NO.: 88001
DRAWN BY: JAC
SCALE: AS SHOWN
CHECKED BY: JAC

DESIGNED BY: JAC
PROJECT ENGINEER: JAC
PROJECT MANAGER: JAC
DATE: 1987

STRUCTURE LEGEND

- 1 24" CUP / 34" X 24" E.CAP.
- 2 24" CUP / 34" X 24" E.CAP.
- 3 18" X 54" CUP ARCH
- 4 LOW FLOW CROSSING
- 5 LOW FLOW CROSSING
- 6 LOW FLOW CROSSING
- 7 20' X 8' BRIDGE W/ WING WALLS
- 8 LOW FLOW CROSSING
- 9 30' CUP
- 10 LOW FLOW CROSSING
- 11 LOW FLOW CROSSING
- 12 SCS POND C3
- 13 14" CUP / 24" CUP
- 14 12" CUP
- 15 LOW FLOW CROSSING
- 16 36" CUP
- 17 LOW FLOW CROSSING
- 18 2 - 36" CUP 100' APART
- 19 18" CUP
- 20 48" STEEL PIPE
- 21 24" CUP / 36" CUP
- 22 54" RCP STORM SEWER W/ DROP INLET
- 23 36" X 54" CUP ARCH
- 24 3 - 36" CUP
- 25 54" CUP
- 26 66" CUP
- 27 48" X 5' CONG. BOX
- 28 50' X 11' BRIDGE W/ WINGWALLS
- 29 50' X 8' BRIDGE W/ WINGWALLS
- 30 50' X 8' BRIDGE W/ WINGWALLS
- 31 50' X 7' BRIDGE W/ ABUTMENTS
- 32 30' CUP
- 33 60' CUP
- 34 14' X 10' BRIDGE W/ ABUTMENTS
- 35 60' CUP
- 36 48" CUP
- 37 2 - 48" CUP
- 38 7' X 12" CUP ARCH
- 39 14' X 6' BRIDGE
- 40 15' X 7' BRIDGE
- 41 4' X 4' CONG. BOX
- 42
- 43
- 44
- 45
- 46



SOUTH SAND CREEK
DRAINAGE BASIN PLANNING STUDY
CITY OF CANON CITY, COLORADO
EXISTING STRUCTURES

NO.	DATE	REVISION	BY

ADP
ARCHITECTURAL DESIGN PARTNERS
1000 E. 10th Ave., Suite 100
Denver, CO 80202
TEL: 303.733.1234
FAX: 303.733.1235
WWW.ADP-ARCHITECTS.COM

DESIGNED BY: [Signature]
PROJECT NUMBER: [Number]
SCALE: 1"=100'
DATE: [Date]

PREPARED BY: [Signature]
CADD FILE NO.: [Number]
DRAWN BY: [Signature]

APPENDIX B

**EXISTING CONDITIONS
TR20 DATA**

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

```

JOB TR-20                                SUMMARY  NOPLOTS
TITLE SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
TITLE EXISTING CONDITIONS : XSL_OUT.TXT

5 RAINFL 7                                0.5
8      0.0000    0.0040    0.0080    0.0100    0.0140
8      0.0190    0.0220    0.0260    0.0300    0.0450
8      0.0600    0.1000    0.7100    0.7500    0.7750
8      0.8000    0.8200    0.8300    0.8400    0.8500
8      0.8600    0.8700    0.8750    0.8850    0.8900
8      0.9000    0.9050    0.9100    0.9200    0.9250
8      0.9300    0.9350    0.9400    0.9450    0.9500
8      0.9550    0.9600    0.9650    0.9700    0.9730
8      0.9750    0.9800    0.9830    0.9870    0.9900
8      0.9930    0.9960    0.9999    1.0000    1.0000

9 ENDTBL
2 XSECTN 002                                1.0
8      5340.0      0.0      0.0
8      5340.7     10.0      2.84
8      5342.9     50.0      8.90
8      5346.8    100.0     15.35
8      5362.5    500.0     62.87
8      5392.8   1000.0    121.15

9 ENDTBL
2 XSECTN 004                                1.0
8      5320.0      0.0      0.0
8      5320.4     10.0      5.70
8      5321.4     50.0     15.46
8      5323.0    100.0     24.04
8      5327.8    500.0     71.09
8      5335.6   1000.0    118.03

9 ENDTBL
2 XSECTN 006                                1.0
8      5320.0      0.0      0.0
8      5320.3     10.0      6.72
8      5320.9     50.0     18.34
8      5322.0    100.0     28.60
8      5324.5    500.0     83.67
8      5328.3   1000.0    135.58

9 ENDTBL
2 XSECTN 008                                1.0
8      5320.0      0.0      0.0
8      5320.5     10.0      4.92
8      5321.6     50.0     14.17
8      5323.3    100.0     22.81
8      5327.3    500.0     72.00
8      5332.9   1000.0    119.77

```

1

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

```

9 ENDTBL
2 XSECTN 010                                1.0

```

8		5320.0	0.0	0.0
8		5320.6	10.0	5.24
8		5321.9	50.0	15.74
8		5323.9	100.0	25.78
8		5328.3	500.0	83.60
8		5334.4	1000.0	139.88
9	ENDTBL			
2	XSECTN 012	1.0		
8		5300.0	0.0	0.0
8		5300.6	10.0	4.01
8		5302.1	50.0	12.53
8		5304.1	100.0	20.77
8		5308.4	500.0	68.46
8		5314.3	1000.0	114.90
9	ENDTBL			
2	XSECTN 014	1.0		
8		5280.0	0.0	0.0
8		5280.6	10.0	4.84
8		5281.9	50.0	14.85
8		5283.8	100.0	24.48
8		5288.0	500.0	80.08
8		5293.6	1000.0	134.18
9	ENDTBL			
2	XSECTN 016	1.0		
8		5250.0	0.0	0.0
8		5250.1	10.0	10.67
8		5250.4	50.0	28.19
8		5250.8	100.0	42.92
8		5251.9	500.0	115.15
8		5253.6	1000.0	177.46
9	ENDTBL			
2	XSECTN 018	1.0		
8		5480.0	0.0	0.0
8		5480.2	10.0	9.34
8		5480.7	50.0	25.00
8		5481.4	100.0	38.45
8		5483.3	500.0	107.48
8		5486.1	1000.0	170.17
9	ENDTBL			
2	XSECTN 020	1.0		
8		5460.0	0.0	0.0
8		5460.5	10.0	4.64
8		5461.8	50.0	14.20
8		5463.7	100.0	23.39

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

8		5467.7	500.0	76.44
8		5473.2	1000.0	128.05
9	ENDTBL			
2	XSECTN 021	1.0		
8		5600.0	0.0	0.0
8		5600.6	10.0	5.79
8		5602.0	50.0	17.66
8		5604.1	100.0	29.07
8		5608.5	500.0	94.89
8		5614.6	1000.0	158.94

9 ENDTBL			
2 XSECTN	022	1.0	
8		5460.0	0.0 0.0
8		5460.4	10.0 3.73
8		5461.2	50.0 11.22
8		5462.4	100.0 18.38
8		5465.1	500.0 59.55
8		5468.7	1000.0 99.55
9 ENDTBL			
2 XSECTN	024	1.0	
8		5420.0	0.0 0.0
8		5420.4	10.0 5.15
8		5421.5	50.0 15.61
8		5422.9	100.0 25.64
8		5426.1	500.0 83.32
8		5430.5	1000.0 139.40
9 ENDTBL			
2 XSECTN	026	1.0	
8		5490.0	0.0 0.0
8		5490.4	10.0 4.35
8		5491.3	50.0 13.04
8		5492.6	100.0 21.34
8		5495.4	500.0 69.01
8		5499.3	1000.0 115.33
9 ENDTBL			
2 XSECTN	028	1.0	
8		5250.0	0.0 0.0
8		5250.2	10.0 12.06
8		5250.7	50.0 33.86
8		5251.5	100.0 53.75
8		5253.3	500.0 164.52
8		5255.8	1000.0 270.93
9 ENDTBL			
2 XSECTN	030	1.0	
8		5310.0	0.0 0.0
8		5310.4	10.0 5.39

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

8		5311.2	50.0 17.30
8		5312.3	100.0 28.86
8		5314.5	500.0 95.65
8		5317.5	1000.0 160.61
9 ENDTBL			
2 XSECTN	032	1.0	
8		5360.0	0.0 0.0
8		5360.3	10.0 6.18
8		5361.2	50.0 17.66
8		5362.4	100.0 28.29
8		5365.4	500.0 88.38
8		5369.5	1000.0 146.45
9 ENDTBL			
2 XSECTN	034	1.0	
8		5390.0	0.0 0.0
8		5390.3	10.0 5.13
8		5391.1	50.0 14.64
8		5392.3	100.0 23.43

8		5395.1	500.0	73.03
8		5399.0	1000.0	120.95
9	ENDTBL			
2	XSECTN 036	1.0		
8		5420.0	0.0	0.0
8		5420.3	10.0	5.38
8		5421.2	50.0	15.38
8		5422.4	100.0	24.66
8		5425.3	500.0	77.04
8		5429.4	1000.0	127.69
9	ENDTBL			
2	XSECTN 038	1.0		
8		5460.0	0.0	0.0
8		5460.4	10.0	6.03
8		5461.5	50.0	17.81
8		5463.1	100.0	28.97
8		5466.7	500.0	92.93
8		5471.6	1000.0	155.04
9	ENDTBL			
2	XSECTN 040	1.0		
8		5580.0	0.0	0.0
8		5580.4	10.0	3.88
8		5581.5	50.0	11.54
8		5583.0	100.0	18.84
8		5586.3	500.0	60.74
8		5591.0	1000.0	101.47
9	ENDTBL			
2	XSECTN 042	1.0		

1

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

8		5660.0	0.0	0.0
8		5660.4	10.0	4.38
8		5661.4	50.0	14.55
8		5662.8	100.0	24.45
8		5665.9	500.0	81.67
8		5670.3	1000.0	91.87
9	ENDTBL			
2	XSECTN 044	1.0		
8		5720.0	0.0	0.0
8		5720.4	10.0	3.38
8		5721.3	50.0	9.97
8		5722.6	100.0	16.21
8		5725.7	500.0	51.99
8		5729.9	1000.0	86.76
9	ENDTBL			
2	XSECTN 046	1.0		
8		5720.0	0.0	0.0
8		5720.4	10.0	3.18
8		5721.2	50.0	9.36
8		5722.5	100.0	15.21
8		5725.4	500.0	48.65
8		5729.5	1000.0	81.14
9	ENDTBL			
2	XSECTN 048	1.0		
8		5560.0	0.0	0.0
8		5560.4	10.0	7.22

8	5561.1	50.0	23.33
8	5562.0	100.0	40.62
8	5563.6	500.0	135.83
8	5565.8	1000.0	228.43
9 ENDTBL			
2 XSECTN 050	1.0		
8	5490.0	0.0	0.0
8	5490.6	10.0	6.04
8	5491.9	50.0	18.37
8	5493.8	100.0	30.19
8	5498.0	500.0	98.33
8	5503.7	1000.0	164.59
9 ENDTBL			
2 XSECTN 052	1.0		
8	5490.0	0.0	0.0
8	5490.2	10.0	4.35
8	5490.8	50.0	11.99
8	5491.6	100.0	18.81
8	5493.6	500.0	56.00
8	5496.5	1000.0	91.35

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

9 ENDTBL			
2 XSECTN 054	1.0		
8	6010.0	0.0	0.0
8	6010.5	10.0	2.18
8	6011.5	50.0	6.70
8	6013.1	100.0	11.06
8	6016.5	500.0	36.27
8	6021.1	1000.0	60.83
9 ENDTBL			
2 XSECTN 056	1.0		
8	6000.0	0.0	0.0
8	6000.5	10.0	2.22
8	6001.6	50.0	6.83
8	6003.1	100.0	11.27
8	6006.5	500.0	36.98
8	6011.2	1000.0	62.03
9 ENDTBL			
2 XSECTN 058	1.0		
8	5680.0	0.0	0.0
8	5680.5	10.0	2.24
8	5681.6	50.0	6.90
8	5683.2	100.0	11.39
8	5686.6	500.0	37.38
8	5691.3	1000.0	62.71
9 ENDTBL			
2 XSECTN 060	1.0		
8	5680.0	0.0	0.0
8	5680.5	10.0	2.53
8	5681.7	50.0	7.85
8	5683.5	100.0	12.99
8	5687.2	500.0	42.75
8	5692.3	1000.0	71.75
9 ENDTBL			
2 XSECTN 062	1.0		

8	5700.0	0.0	0.0
8	5700.4	10.0	2.93
8	5701.4	50.0	8.94
8	5702.7	100.0	14.71
8	5705.7	500.0	48.02
8	5709.7	1000.0	80.42
9	ENDTBL		
3	STRUCT	01	
8	5280.0	0.0	0.0
8	5282.0	30.0	0.30
8	5284.0	188.0	1.49
8	5286.0	581.0	4.05

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

8	5287.0	1138.0	6.00
8	5288.0	1909.0	8.47
9	ENDTBL		
3	STRUCT	02	
8	5310.0	0.0	0.0
8	5312.0	57.0	0.27
8	5314.0	143.0	1.92
8	5316.0	260.0	6.24
8	5317.0	332.0	9.80
8	5318.0	385.0	14.51
8	5319.0	405.0	14.51
8	5320.0	417.0	14.51
9	ENDTBL		
3	STRUCT	07	
8	5360.0	0.0	0.0
8	5362.0	180.0	0.07
8	5364.0	480.0	0.35
8	5366.0	900.0	0.94
8	5367.0	1100.0	1.39
8	5368.0	1300.0	1.94
8	5369.0	1600.0	2.63
8	5370.0	1700.0	3.46
9	ENDTBL		
3	STRUCT	18	
8	5320.0	0.0	0.0
8	5322.0	18.0	0.19
8	5324.0	45.0	0.76
8	5326.0	60.0	1.75
8	5327.0	70.0	2.42
8	5328.0	75.0	3.22
8	5329.0	80.0	4.15
8	5330.0	85.0	5.22
9	ENDTBL		
3	STRUCT	24	
8	5320.0	0.0	0.0
8	5322.0	26.0	0.04
8	5324.0	80.0	0.19
8	5326.0	140.0	0.49
8	5327.0	160.0	0.71
8	5328.0	180.0	0.99
8	5329.0	190.0	1.32
8	5330.0	210.0	1.73

```

9 ENDTBL
3 STRUCT      28
8              5250.0      0.0      0.0
8              5252.0      30.0     0.04
1

```

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

```

8              5254.0      88.0      0.19
8              5256.0      160.0     0.49
8              5257.0      200.0     0.71
8              5258.0      314.0     0.99
8              5259.0      747.0     1.32
8              5260.0     1446.0     1.73

```

```

9 ENDTBL
3 STRUCT      31
8              5300.0        0.0      0.0
8              5302.0      500.0     0.04
8              5304.0     1000.0     0.16
8              5306.0     1850.0     0.35
8              5307.0     2250.0     0.47
8              5308.0     2750.0     0.61
8              5309.0     3400.0     0.78
8              5310.0     4000.0     0.95

```

```

9 ENDTBL
3 STRUCT      32
8              5310.0        0.0      0.0
8              5312.0      380.0     0.04
8              5314.0      760.0     0.16
8              5316.0     1406.0     0.35
8              5317.0     1824.0     0.47
8              5318.0     2128.0     0.61
8              5319.0     2660.0     0.78
8              5320.0     3040.0     0.95

```

```

9 ENDTBL
3 STRUCT      33
8              5320.0        0.0      0.0
8              5322.0      400.0     0.05
8              5324.0     1000.0     0.21
8              5326.0     1850.0     0.52
8              5327.0     2500.0     0.74
8              5328.0     3000.0     1.01
8              5429.0     3500.0     1.34
8              5430.0     4000.0     1.73

```

```

9 ENDTBL
3 STRUCT      35
8              5350.0        0.0      0.0
8              5352.0      468.0     0.05
8              5354.0     1248.0     0.21
8              5356.0     2340.0     0.52
8              5357.0     2860.0     0.74
8              5358.0     3380.0     1.01
8              5359.0     3900.0     1.34

```

```

9 ENDTBL

```

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

3	STRUCT	34			
8			5340.0	0.0	0.0
8			5342.0	225.0	0.05
8			5344.0	500.0	0.21
8			5346.0	925.0	0.52
8			5347.0	1200.0	0.74
8			5348.0	1450.0	1.01
8			5349.0	1750.0	1.34
9	ENDTBL				
3	STRUCT	37			
8			5560.0	0.0	0.0
8			5562.0	26.0	0.02
8			5564.0	80.0	0.13
8			5566.0	145.0	0.35
8			5567.0	170.0	0.53
8			5568.0	190.0	0.76
8			5569.0	210.0	1.04
8			5570.0	220.0	1.39
9	ENDTBL				
3	STRUCT	38			
8			5570.0	0.0	0.0
8			5572.0	110.0	0.04
8			5574.0	200.0	0.20
8			5576.0	370.0	0.53
8			5577.0	480.0	0.77
8			5578.0	600.0	1.07
8			5579.0	700.0	1.43
8			5580.0	800.0	1.87
9	ENDTBL				
3	STRUCT	39			
8			5600.0	0.0	0.0
8			5602.0	26.0	0.03
8			5604.0	80.0	0.14
8			5606.0	146.0	0.39
8			5607.0	170.0	0.58
8			5608.0	190.0	0.83
8			5609.0	210.0	1.13
8			5610.0	220.0	1.50
9	ENDTBL				
3	STRUCT	41			
8			5500.0	0.0	0.0
8			5502.0	44.0	0.02
8			5504.0	130.0	0.10
8			5506.0	200.0	0.27
8			5507.0	434.0	0.41
8			5508.0	905.0	0.57

1

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

8			5509.0	1589.0	0.78
8			5510.0	2508.0	1.03
9	ENDTBL				
3	STRUCT	42			
8			5250.0	0.0	0.0
8			5252.0	90.0	0.16

8	5254.0	300.0	0.65
8	5256.0	540.0	1.57
8	5257.0	660.0	2.21
8	5258.0	780.0	2.98
8	5259.0	870.0	3.90
8	5260.0	900.0	4.98
8	5261.0	1020.0	6.22
8	5262.0	1065.0	7.63
8	5263.0	1125.0	9.23
8	5264.0	1170.0	11.03
8	5265.0	1260.0	13.03
8	5266.0	1290.0	15.25
8	5267.0	1908.0	18.32
8	5268.0	3026.0	20.37
8	5269.0	4559.0	23.30

9	ENDTBL		
3	STRUCT	43	

8	5320.0	0.0	0.0
8	5322.0	75.0	0.02
8	5324.0	190.0	0.08
8	5326.0	380.0	0.19
8	5327.0	475.0	0.26
8	5328.0	600.0	0.33
8	5329.0	650.0	0.41
8	5330.0	750.0	0.51

9	ENDTBL		
3	STRUCT	44	

8	5340.0	0.0	0.0
8	5342.0	112.0	0.02
8	5344.0	350.0	0.08
8	5346.0	602.0	0.19
8	5347.0	742.0	0.26
8	5348.0	840.0	0.33
8	5349.0	1070.0	0.41
8	5350.0	1432.0	0.51

9	ENDTBL		
3	STRUCT	45	

8	5340.0	0.0	0.0
8	5342.0	135.0	0.02
8	5344.0	375.0	0.08

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

8	5346.0	676.0	0.19
8	5347.0	826.0	0.26
8	5348.0	975.0	0.33
8	5349.0	1215.0	0.41
8	5350.0	1657.0	0.51

9	ENDTBL		
3	STRUCT	46	

8	5340.0	0.0	0.0
8	5344.0	92.0	0.02
8	5346.0	148.0	0.04
8	5347.0	168.0	0.05
8	5348.0	212.0	0.06
8	5349.0	344.0	0.08
8	5350.0	719.0	0.10

```

9 ENDTBL
6 RUNOFF 1 054      7 0.6080    77.3      0.340 1
6 RUNOFF 1 056      6 0.2370    80.0      0.313 1
6 ADDHYD 4 044    7 6 5      1
6 REACH 3 044    5 4 4400.0      1
6 RUNOFF 1 044      3 0.1330    69.0      0.423 1
6 ADDHYD 4 044    4 3 2      1
6 REACH 3 042    2 7 5700.0      1
6 RUNOFF 1 042      6 0.2790    70.5      0.464 1
6 ADDHYD 4 042    7 6 5      1
6 RUNOFF 1 046      2 0.3820    64.6      0.452 1
6 ADDHYD 4 042    5 2 1      1
6 REACH 3 040    1 6 6600.0      1
6 RUNOFF 1 040      5 0.5180    69.0      0.521 1
6 ADDHYD 4 040    6 5 4      1
6 REACH 3 018    4 7 5500.0      1
6 RUNOFF 1 018      6 0.4530    72.0      0.730 1
6 ADDHYD 4 018    7 6 5      1
6 RESVOR 2    42 5 3 5250.0      1 1
6 RUNOFF 1 021      1 0.4100    72.6      0.603 1
6 REACH 3 021    1 7 5500.0      1
6 RESVOR 2    39 7 2 5600.0      1 1
6 REACH 3 020    2 7 4500.0      1
6 RUNOFF 1 020      1 0.2990    80.4      0.346 1
6 ADDHYD 4 020    7 1 5      1
6 ADDHYD 4 018    3 5 4      1
6 REACH 3 006    4 3 5500.0      1
6 RUNOFF 1 006      2 0.4540    74.6      0.477 1
6 ADDHYD 4 006    3 2 7      1
6 RESVOR 2    35 7 3 5350.0      1 1
6 RESVOR 2    34 3 2 5340.0      1 1
6 RESVOR 2    33 2 7 5320.0      1 1

```

1

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

```

6 RESVOR 2    32 7 6 5310.0      1 1
6 RESVOR 2    31 6 1 5300.0      1 1
6 RUNOFF 1 004      7 0.5370    71.6      0.581 1
6 REACH 3 004    7 6 7200.0      1
6 RESVOR 2    45 6 5 5340.0      1 1
6 RESVOR 2    44 5 4 5340.0      1 1
6 RESVOR 2    43 4 2 5320.0      1 1
6 RUNOFF 1 002      7 0.2200    70.8      0.378 1
6 REACH 3 002    7 6 3750.0      1
6 RESVOR 2    46 6 3 5340.0      1 1
6 RUNOFF 1 022      7 0.5610    78.9      0.618 1
6 REACH 3 022    7 6 9800.0      1
6 RESVOR 2    28 6 5 5250.0      1 1
6 REACH 3 010    5 7 5000.0      1
6 RUNOFF 1 010      4 0.3500    79.2      0.439 1
6 ADDHYD 4 010    7 4 6      1
6 RESVOR 2    24 6 5 5320.0      1 1
6 REACH 3 008    5 6 3500.0      1
6 RUNOFF 1 008      7 0.2500    83.7      0.204 1
6 ADDHYD 4 008    6 7 4      1
  ENDATA
7 INCREM 6      0.10

```

```

7 COMPUT 7 054 008 0.0 3.80 1.0 7 2 01 01
  ENDCMP 1
7 INCREM 6 0.10
7 COMPUT 7 054 008 0.0 3.50 1.0 7 2 01 02
  ENDCMP 1
7 INCREM 6 0.10
7 COMPUT 7 054 008 0.0 3.10 1.0 7 2 01 03
  ENDCMP 1
  ENDJOB 2

```

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

FR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TYT

JOB 1 PASS 1
PAGE 1

COMPUTER PROGRAM FOR PROJECT FORMULATION - HYDROLOGY USER NOTES

THE USERS MANUAL FOR THIS PROGRAM IS THE MAY 1983 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)

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 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 1
PAGE 2

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 54

TO XSECTION 8

STARTING TIME = .00 RAIN DEPTH = 3.80 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	797.88	(RUNOFF)
7.46	52.01	(RUNOFF)
10.41	21.68	(RUNOFF)
11.52	20.99	(RUNOFF)
12.52	21.15	(RUNOFF)
14.02	21.35	(RUNOFF)
18.91	11.35	(RUNOFF)
20.53	10.89	(RUNOFF)
21.51	8.97	(RUNOFF)
23.47	8.81	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	366.84	(RUNOFF)
7.46	21.78	(RUNOFF)
10.40	9.01	(RUNOFF)
11.50	8.79	(RUNOFF)
12.50	8.84	(RUNOFF)
14.00	8.91	(RUNOFF)
18.88	4.68	(RUNOFF)
20.52	4.53	(RUNOFF)
23.46	3.66	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 1
PAGE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	1163.44	5731.27
7.46	73.79	5721.92
10.40	30.69	5720.87
11.51	29.78	5720.84
12.51	29.99	5720.85
14.01	30.25	5720.86
18.89	16.03	5720.54
20.53	15.42	5720.52
21.51	12.68	5720.46
23.47	12.47	5720.46

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 44 BY 158.1 CFS

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

OPERATION REACH CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1116.25	5730.88
7.56	73.76	5721.92
10.52	30.68	5720.87
11.63	29.50	5720.84
12.63	29.71	5720.84
14.14	29.96	5720.85
19.00	16.03	5720.54
20.65	15.32	5720.52
21.63	12.62	5720.46
23.58	12.36	5720.45

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	96.82	(RUNOFF)
7.46	8.72	(RUNOFF)
10.45	3.74	(RUNOFF)
11.56	3.55	(RUNOFF)
12.56	3.58	(RUNOFF)
14.06	3.64	(RUNOFF)
18.95	2.02	(RUNOFF)
23.49	1.54	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 1
PAGE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1210.82	5731.67
10.47	34.42	5720.95
11.62	32.97	5720.92
12.62	33.21	5720.92
14.12	33.53	5720.93
18.96	18.05	5720.58
20.64	17.12	5720.56
21.62	14.18	5720.49
23.57	13.88	5720.49

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 42 BY 210.6 CFS

*** WARNING REACH 42 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	1187.86	5671.95
10.58	34.41	5661.01
11.73	32.83	5660.97
12.74	33.07	5660.98
14.24	33.38	5660.98
19.06	18.05	5660.60
20.75	17.08	5660.58
21.73	14.15	5660.50
23.67	13.82	5660.50

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	212.52	(RUNOFF)
10.45	8.23	(RUNOFF)
11.58	7.67	(RUNOFF)
12.58	7.77	(RUNOFF)
14.08	7.83	(RUNOFF)
18.94	4.40	(RUNOFF)
20.60	4.04	(RUNOFF)
23.51	3.33	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 1
PAGE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	1360.41	5673.47
10.47	42.59	5661.21
11.70	39.95	5661.15
12.70	40.26	5661.16
14.21	40.62	5661.17

18.96	22.45	5660.71
20.73	20.83	5660.67
21.70	17.46	5660.59
23.62	16.78	5660.57

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	196.23	(RUNOFF)
10.45	9.15	(RUNOFF)
11.57	8.60	(RUNOFF)
12.57	8.75	(RUNOFF)
14.08	8.89	(RUNOFF)
18.92	5.03	(RUNOFF)
20.60	4.65	(RUNOFF)
23.51	3.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	1527.68	5674.94
10.46	51.74	5661.45
11.68	48.10	5661.35
12.68	48.51	5661.36
14.18	49.00	5661.38
18.95	27.48	5660.84
20.70	25.24	5660.78
21.67	21.30	5660.68
23.59	20.50	5660.66

U *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 40 BY 521.4 CFS

OPERATION REACH CROSS SECTION 40

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 1
 PAGE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	1367.53	5594.46
10.57	51.68	5581.55
11.84	46.61	5581.41
12.84	47.02	5581.42
14.34	47.41	5581.43
19.06	27.46	5580.88
20.87	24.41	5580.80
21.83	21.00	5580.70
23.73	20.03	5580.68

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	329.36	(RUNOFF)

10.45	14.54	(RUNOFF)
11.60	13.31	(RUNOFF)
12.60	13.45	(RUNOFF)
14.11	13.56	(RUNOFF)
18.89	7.83	(RUNOFF)
20.64	7.01	(RUNOFF)
21.60	6.06	(RUNOFF)
23.53	5.82	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(Feet)
6.41	1587.30	5596.52
10.48	66.14	5581.98
11.79	58.19	5581.75
12.79	58.75	5581.76
14.30	59.19	5581.78
18.96	35.28	5581.10
20.83	30.63	5580.97
21.78	26.70	5580.86
23.66	25.27	5580.82

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 18 BY 586.3 CFS

OPERATION REACH CROSS SECTION 18

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 1
 PAGE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(Feet)
6.58	1409.62	5488.39
10.61	66.05	5480.92
11.96	56.41	5480.79
12.96	56.94	5480.80
14.48	57.10	5480.80
19.08	35.26	5480.52
21.02	29.52	5480.44
21.94	26.37	5480.40
23.80	24.67	5480.38

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(Feet)
6.33	269.80	(RUNOFF)
10.46	13.93	(RUNOFF)
11.70	12.01	(RUNOFF)
12.71	12.00	(RUNOFF)
14.22	11.99	(RUNOFF)
18.91	7.44	(RUNOFF)
21.69	5.61	(RUNOFF)
23.58	5.24	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	1607.73	5489.50
10.53	79.89	5481.12
11.93	67.12	5480.94
12.93	67.72	5480.95
14.44	67.80	5480.95
18.98	42.68	5480.61
21.00	35.18	5480.52
21.90	31.72	5480.47
23.75	29.41	5480.44

*** WARNING - STRUCTURE 42 DELTA T IS TOO LARGE. 0 / 2 > S / DELTA T OCCURED 3 TIMES STARTING WITH POINT259

OPERATION RESVOR STRUCTURE 42

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 1
PAGE 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.76	1285.69	5265.86
10.56	79.91	5251.78
11.95	67.06	5251.49
12.95	67.66	5251.50
14.46	67.75	5251.51
18.99	42.68	5250.95
21.02	35.15	5250.78
21.92	31.71	5250.70
23.77	29.37	5250.65

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 2.61 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .31	3.15 15.49 53.81	
6.00	DISCHG 137.80 298.46 515.38 783.38 959.44 1119.54 1233.66	1280.61 1283.25 1256.77	
7.00	DISCHG 1139.71 1010.28 755.27 420.37 306.39 253.68 228.75	211.73 201.33 193.95	
8.00	DISCHG 187.88 181.73 174.81 167.01 158.22 148.28 136.86	124.27 112.10 101.84	
9.00	DISCHG 94.02 88.33 84.49 82.32 80.89 80.09 79.64	79.42 79.33 79.34	
10.00	DISCHG 79.39 79.47 79.56 79.66 79.76 79.87 79.88	79.59 78.58 76.43	
11.00	DISCHG 73.02 68.36 63.02 58.42 55.78 55.51 57.57	61.22 64.78 66.82	
12.00	DISCHG 66.78 64.55 60.85 57.29 55.27 55.40 57.74	61.57 65.26 67.40	
13.00	DISCHG 67.37 65.01 60.86 56.11 51.79 48.38 46.01	44.76 44.82 46.44	
14.00	DISCHG 49.60 54.23 59.68 64.45 67.23 67.59 65.45	61.38 56.65 52.34	
15.00	DISCHG 48.91 46.42 44.72 43.62 42.93 42.51 42.26	42.12 42.05 42.02	
16.00	DISCHG 42.01 42.01 42.03 42.04 42.07 42.09 42.11	42.14 42.16 42.19	
17.00	DISCHG 42.21 42.23 42.26 42.28 42.30 42.33 42.35	42.38 42.40 42.42	
18.00	DISCHG 42.45 42.47 42.50 42.52 42.54 42.57 42.59	42.61 42.64 42.66	
19.00	DISCHG 42.68 42.65 42.50 42.04 41.10 39.63 37.57	35.02 32.32 29.75	
20.00	DISCHG 27.40 25.30 23.56 22.55 22.61 23.85 26.22	29.31 32.25 34.30	
21.00	DISCHG 35.13 34.76 33.51 32.03 30.87 30.30 30.34	30.84 31.40 31.70	
22.00	DISCHG 31.59 31.03 30.12 29.10 28.19 27.47 26.95	26.60 26.37 26.23	
23.00	DISCHG 26.15 26.12 26.17 26.38 26.81 27.49 28.34	29.12 29.32 28.45	
24.00	DISCHG 26.32 22.87 18.45 13.90 9.94 6.83 4.56	2.96 1.88 1.17	
25.00	DISCHG .71 .42 .24 .14 .07 .04 .02	.00	

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	294.60	(RUNOFF)
10.43	12.84	(RUNOFF)
11.64	11.44	(RUNOFF)
12.65	11.52	(RUNOFF)
14.15	11.52	(RUNOFF)
18.89	6.84	(RUNOFF)
20.69	5.92	(RUNOFF)
21.64	5.22	(RUNOFF)
23.56	4.98	(RUNOFF)

1

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 1
PAGE 9

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	227.28	5605.50
10.56	12.82	5600.70
11.85	10.75	5600.63
12.85	10.78	5600.63
14.38	10.60	5600.62
19.05	6.84	5600.41
23.72	4.74	5600.28

OPERATION RESVOR STRUCTURE 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.62	209.52	5608.98
10.57	12.82	5600.99
11.86	10.75	5600.83
12.87	10.77	5600.83
14.40	10.60	5600.82
19.06	6.84	5600.53
23.74	4.73	5600.36

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .41 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.10	1.37	8.03
6.00	DISCHG	27.41	60.41	106.49	153.92	181.72	200.55	209.23	205.86	192.45	170.59
7.00	DISCHG	134.08	100.28	83.49	66.87	57.24	49.74	44.31	40.28	37.21	34.71
8.00	DISCHG	32.56	30.74	29.18	27.69	26.02	23.77	21.88	19.82	18.17	16.76
9.00	DISCHG	15.69	14.85	14.24	13.78	13.45	13.22	13.06	12.95	12.87	12.83
10.00	DISCHG	12.80	12.79	12.78	12.79	12.80	12.81	12.82	12.78	12.60	12.18
11.00	DISCHG	11.50	10.68	9.89	9.33	9.15	9.35	9.81	10.33	10.69	10.72
12.00	DISCHG	10.42	9.90	9.34	8.95	8.90	9.19	9.71	10.28	10.69	10.76
13.00	DISCHG	10.48	9.97	9.35	8.77	8.27	7.86	7.54	7.34	7.36	7.68
14.00	DISCHG	8.30	9.09	9.87	10.42	10.60	10.40	9.93	9.36	8.80	8.31
15.00	DISCHG	7.92	7.60	7.36	7.18	7.05	6.95	6.89	6.83	6.80	6.78
16.00	DISCHG	6.76	6.75	6.75	6.74	6.74	6.74	6.75	6.75	6.75	6.76
17.00	DISCHG	6.76	6.76	6.77	6.77	6.77	6.78	6.78	6.79	6.79	6.79

18.00	DISCHG	6.80	6.80	6.80	6.81	6.81	6.82	6.82	6.82	6.83	6.83
19.00	DISCHG	6.83	6.83	6.82	6.74	6.55	6.26	5.91	5.54	5.18	4.81
20.00	DISCHG	4.45	4.12	3.84	3.71	3.79	4.07	4.49	4.93	5.27	5.44
21.00	DISCHG	5.43	5.30	5.12	4.97	4.89	4.89	4.96	5.04	5.10	5.09
22.00	DISCHG	5.01	4.89	4.76	4.63	4.52	4.43	4.36	4.30	4.27	4.24
23.00	DISCHG	4.22	4.20	4.20	4.23	4.31	4.44	4.60	4.72	4.71	4.47
24.00	DISCHG	4.01	3.40	2.76	2.17	1.67	1.27	.95	.69	.50	.36
25.00	DISCHG	.26	.18	.13	.09	.06	.04	.02	.02	.01	.01

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TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 1
REV PC 09/83(.2)	EXISTING CONDITIONS : XS1_OUT.TXT		PAGE 10

OPERATION REACH CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.84	195.73	5464.66
10.68	12.81	5460.59
12.04	10.50	5460.52
13.05	10.49	5460.52
14.60	10.23	5460.51
19.18	6.83	5460.34
23.89	4.64	5460.23

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	452.67	(RUNOFF)
7.45	27.75	(RUNOFF)
10.39	11.47	(RUNOFF)
11.52	11.06	(RUNOFF)
12.52	11.15	(RUNOFF)
14.02	11.19	(RUNOFF)
18.89	5.95	(RUNOFF)
20.54	5.68	(RUNOFF)
21.52	4.69	(RUNOFF)
23.47	4.60	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	465.66	5467.36
6.73	234.11	5465.04
11.46	20.75	5460.85
12.51	20.32	5460.84
14.06	18.96	5460.79
18.95	12.79	5460.59
21.45	9.71	5460.49
23.48	8.85	5460.44

OPERATION ADDHYD CROSS SECTION 18

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	1519.62	5489.01
10.47	104.15	5481.42
11.93	83.93	5481.17
12.93	84.50	5481.18
14.46	84.23	5481.18
18.96	55.47	5480.78
21.03	44.08	5480.63
21.89	40.53	5480.58
23.62	36.94	5480.54

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 6 BY 516.0 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.94	1491.24	5332.03
10.58	104.06	5322.03
12.09	83.17	5321.63
13.08	83.67	5321.64
14.62	82.96	5321.63
19.07	55.44	5321.02
21.21	43.43	5320.80
22.02	40.43	5320.76
23.77	36.59	5320.70

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	425.91	(RUNOFF)
10.45	15.11	(RUNOFF)
11.58	13.97	(RUNOFF)
12.58	14.09	(RUNOFF)
14.09	14.17	(RUNOFF)
18.89	7.97	(RUNOFF)
20.61	7.25	(RUNOFF)
21.58	6.18	(RUNOFF)
23.51	5.96	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
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6.92	1545.63	5332.45
10.48	119.05	5322.12
12.10	92.11	5321.83
13.05	92.43	5321.83
14.60	91.70	5321.82
18.97	63.38	5321.19
21.24	48.83	5320.88
23.63	41.68	5320.78

OPERATION RESVOR STRUCTURE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.92	1545.70	5354.55
10.56	119.19	5350.51
12.05	92.10	5350.39
13.04	92.47	5350.40
14.60	91.72	5350.39
18.97	63.38	5350.27
21.24	48.83	5350.21
23.63	41.68	5350.18

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.62	15.29	86.27	258.32
6.00	DISCHG	518.96	805.88	1030.69	1127.53	1193.15	1253.33	1352.27	1454.11	1519.84	1544.97
7.00	DISCHG	1534.27	1457.28	1334.21	1123.80	826.20	618.96	491.48	412.02	363.91	329.10
8.00	DISCHG	308.42	290.50	277.26	259.92	245.07	228.70	215.83	200.51	186.97	171.42
9.00	DISCHG	159.19	147.11	139.16	131.65	127.83	123.88	122.48	120.41	120.19	119.04
10.00	DISCHG	119.33	118.63	119.12	118.64	119.19	118.83	119.05	117.40	115.00	111.00
11.00	DISCHG	107.44	103.23	99.90	96.64	94.45	92.25	91.39	90.83	91.09	91.26
12.00	DISCHG	92.01	92.00	91.97	91.42	91.04	90.25	90.25	90.38	91.00	91.55
13.00	DISCHG	92.41	92.27	90.83	87.43	83.13	78.37	74.51	72.34	72.68	74.48
14.00	DISCHG	77.29	80.37	83.65	86.39	88.91	90.79	91.72	90.66	87.76	83.50
15.00	DISCHG	78.98	74.73	71.27	68.54	66.61	65.18	64.26	63.60	63.21	62.92
16.00	DISCHG	62.78	62.66	62.62	62.58	62.59	62.58	62.62	62.62	62.67	62.68
17.00	DISCHG	62.73	62.74	62.79	62.81	62.85	62.88	62.92	62.94	62.99	63.01
18.00	DISCHG	63.05	63.08	63.12	63.14	63.18	63.21	63.25	63.28	63.32	63.34
19.00	DISCHG	63.37	63.26	62.73	61.53	59.96	58.29	56.41	53.97	50.83	47.34
20.00	DISCHG	43.96	41.04	39.10	38.33	38.41	38.98	40.05	41.54	43.29	45.18
21.00	DISCHG	46.92	48.19	48.78	48.71	48.17	47.42	46.74	46.24	45.88	45.69
22.00	DISCHG	45.59	45.41	44.96	44.18	43.20	42.18	41.27	40.52	39.94	39.52
23.00	DISCHG	39.23	39.10	39.23	39.70	40.37	41.09	41.65	41.49	40.32	38.50
24.00	DISCHG	36.42	33.88	30.47	26.10	21.23	16.51	12.37	9.01	6.40	4.47
25.00	DISCHG	3.07	2.08	1.40	.93	.62	.41	.27	.18	.11	.07
26.00	DISCHG	.04	.03	.02	.01	.00					

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TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 1
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OPERATION RESVOR STRUCTURE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.93	1545.81	5348.32
10.49	119.18	5341.06

12.10	92.17	5340.82
13.06	92.55	5340.82
14.60	91.66	5340.81
18.97	63.37	5340.56
21.24	48.83	5340.43
23.63	41.68	5340.37

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.59	14.57	83.30	250.13
6.00	DISCHG	492.96	781.25	1012.93	1123.83	1185.01	1246.44	1335.81	1442.65	1512.69	1543.83
7.00	DISCHG	1537.18	1471.78	1351.30	1154.97	852.37	631.73	501.67	414.21	368.20	330.16
8.00	DISCHG	310.17	291.39	278.22	261.34	245.84	230.14	215.62	201.48	186.79	172.38
9.00	DISCHG	158.95	147.94	138.82	132.34	127.41	124.46	122.03	120.92	119.74	119.50
10.00	DISCHG	118.90	119.05	118.72	119.03	118.82	119.18	118.72	117.78	114.79	111.40
11.00	DISCHG	107.26	103.61	99.73	96.95	94.28	92.52	91.20	91.04	90.89	91.42
12.00	DISCHG	91.82	92.17	91.82	91.58	90.91	90.40	90.11	90.50	90.87	91.65
13.00	DISCHG	92.28	92.39	90.80	87.64	83.16	78.58	74.52	72.44	72.57	74.49
14.00	DISCHG	77.13	80.35	83.51	86.39	88.79	90.81	91.66	90.77	87.81	83.67
15.00	DISCHG	79.05	74.88	71.32	68.64	66.61	65.25	64.25	63.64	63.19	62.95
16.00	DISCHG	62.76	62.68	62.60	62.60	62.57	62.60	62.60	62.64	62.65	62.69
17.00	DISCHG	62.71	62.76	62.77	62.82	62.84	62.89	62.91	62.95	62.98	63.02
18.00	DISCHG	63.04	63.08	63.11	63.15	63.18	63.22	63.24	63.28	63.31	63.35
19.00	DISCHG	63.37	63.27	62.75	61.58	60.00	58.34	56.46	54.05	50.92	47.44
20.00	DISCHG	44.05	41.11	39.14	38.34	38.39	38.97	40.02	41.49	43.24	45.13
21.00	DISCHG	46.88	48.17	48.77	48.72	48.18	47.44	46.75	46.25	45.89	45.70
22.00	DISCHG	45.59	45.42	44.98	44.21	43.23	42.21	41.29	40.53	39.95	39.53
23.00	DISCHG	39.24	39.10	39.22	39.68	40.35	41.07	41.64	41.51	40.36	38.55
24.00	DISCHG	36.47	33.96	30.58	26.23	21.37	16.63	12.47	9.09	6.46	4.51
25.00	DISCHG	3.10	2.11	1.42	.94	.62	.41	.27	.18	.11	.07
26.00	DISCHG	.04	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 33

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TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.94	1544.80	5325.28
10.55	119.14	5320.60
12.10	92.01	5320.46
13.04	92.47	5320.46
14.60	91.72	5320.46
18.98	63.38	5320.32
21.24	48.83	5320.24
23.63	41.68	5320.21

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.57	14.17	81.65	246.78
6.00	DISCHG	486.11	769.78	1008.76	1118.33	1184.66	1241.75	1332.49	1436.77	1511.94	1541.94
7.00	DISCHG	1539.31	1475.30	1358.12	1165.18	865.42	633.64	507.88	414.05	370.17	329.43
8.00	DISCHG	311.44	290.74	279.22	260.89	246.71	229.78	216.39	201.17	187.51	172.12
9.00	DISCHG	159.58	147.66	139.34	132.04	127.84	124.14	122.40	120.60	120.07	119.19
10.00	DISCHG	119.21	118.76	119.00	118.75	119.08	118.92	118.98	117.56	115.08	111.22
11.00	DISCHG	107.55	103.44	100.00	96.78	94.52	92.35	91.40	90.85	91.07	91.24

12.00	DISCHG	91.98	92.01	91.98	91.44	91.07	90.27	90.24	90.37	90.98	91.51
13.00	DISCHG	92.39	92.29	90.94	87.60	83.33	78.55	74.67	72.37	72.64	74.37
14.00	DISCHG	77.17	80.22	83.53	86.27	88.82	90.72	91.72	90.74	87.93	83.68
15.00	DISCHG	79.18	74.88	71.42	68.63	66.69	65.22	64.31	63.61	63.24	62.92
16.00	DISCHG	62.80	62.65	62.64	62.57	62.60	62.57	62.63	62.61	62.68	62.67
17.00	DISCHG	62.74	62.73	62.80	62.80	62.86	62.87	62.93	62.93	62.99	63.00
18.00	DISCHG	63.06	63.07	63.13	63.14	63.19	63.20	63.25	63.27	63.32	63.34
19.00	DISCHG	63.38	63.26	62.77	61.59	60.03	58.36	56.50	54.08	50.98	47.48
20.00	DISCHG	44.10	41.15	39.16	38.34	38.39	38.95	40.00	41.47	43.22	45.09
21.00	DISCHG	46.86	48.15	48.77	48.72	48.20	47.45	46.77	46.25	45.90	45.69
22.00	DISCHG	45.60	45.42	44.99	44.22	43.25	42.22	41.31	40.54	39.96	39.53
23.00	DISCHG	39.25	39.10	39.22	39.67	40.35	41.06	41.64	41.52	40.39	38.58
24.00	DISCHG	36.51	34.00	30.64	26.30	21.44	16.70	12.53	9.13	6.50	4.54
25.00	DISCHG	3.12	2.12	1.43	.95	.63	.41	.27	.18	.11	.07
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.94	1544.87	5316.33
9.87	119.83	5310.63
10.50	119.37	5310.63
12.10	92.27	5310.49
13.06	92.60	5310.49
14.60	91.60	5310.48
18.94	63.37	5310.33
21.25	48.82	5310.26
23.64	41.67	5310.22

PR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 1
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TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.56	13.85	80.28	243.98
6.00	DISCHG	477.96	756.64	1004.26	1114.94	1183.19	1239.23	1328.64	1433.22	1510.15	1541.55
7.00	DISCHG	1539.81	1479.02	1362.57	1174.14	877.57	639.10	512.12	417.08	370.23	330.38
8.00	DISCHG	310.98	291.69	278.60	261.94	246.07	230.80	215.74	202.16	186.91	173.07
9.00	DISCHG	158.99	148.53	138.73	132.80	127.22	124.82	121.80	121.22	119.50	119.76
10.00	DISCHG	118.67	119.28	118.50	119.24	118.61	119.37	118.55	118.01	114.72	111.66
11.00	DISCHG	107.22	103.86	99.69	97.16	94.22	92.68	91.11	91.15	90.79	91.51
12.00	DISCHG	91.71	92.27	91.74	91.68	90.85	90.50	90.02	90.57	90.77	91.70
13.00	DISCHG	92.19	92.48	90.79	87.82	83.22	78.78	74.55	72.53	72.47	74.48
14.00	DISCHG	76.99	80.32	83.36	86.37	88.67	90.82	91.60	90.87	87.87	83.84
15.00	DISCHG	79.13	75.03	71.36	68.75	66.62	65.32	64.24	63.69	63.17	62.99
16.00	DISCHG	62.73	62.72	62.57	62.63	62.54	62.63	62.57	62.67	62.62	62.72
17.00	DISCHG	62.68	62.78	62.75	62.84	62.82	62.91	62.89	62.97	62.95	63.04
18.00	DISCHG	63.02	63.10	63.09	63.17	63.16	63.23	63.22	63.30	63.29	63.36
19.00	DISCHG	63.35	63.29	62.76	61.63	60.03	58.40	56.51	54.14	51.01	47.55
20.00	DISCHG	44.12	41.20	39.16	38.36	38.37	38.95	39.97	41.46	43.18	45.08
21.00	DISCHG	46.83	48.15	48.75	48.74	48.20	47.47	46.76	46.27	45.90	45.70
22.00	DISCHG	45.59	45.43	44.99	44.24	43.25	42.24	41.31	40.56	39.96	39.54
23.00	DISCHG	39.24	39.10	39.21	39.67	40.33	41.05	41.63	41.53	40.40	38.61
24.00	DISCHG	36.53	34.04	30.68	26.37	21.50	16.76	12.58	9.17	6.52	4.56
25.00	DISCHG	3.13	2.13	1.43	.96	.63	.42	.27	.18	.11	.07

26.00 DISCHG .04 .03 .02 .01 .00

OPERATION RESVOR STRUCTURE 31

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.95	1544.74	5305.28
10.56	119.18	5300.48
12.17	92.15	5300.37
13.03	92.55	5300.37
14.60	91.81	5300.37
18.99	63.42	5300.25
21.24	48.85	5300.20
23.63	41.68	5300.17

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.55	13.61	79.25	241.86	
6.00	DISCHG	475.56	744.37	1001.59	1111.66	1182.63	1236.86	1326.19	1430.06	1509.04	1540.93
7.00	DISCHG	1540.46	1481.56	1366.26	1180.50	887.51	643.34	515.32	416.39	371.78	329.65
8.00	DISCHG	312.06	291.02	279.49	261.39	246.90	230.30	216.51	201.68	187.66	172.61
9.00	DISCHG	159.70	148.04	139.39	132.28	127.83	124.29	122.37	120.69	120.05	119.23
10.00	DISCHG	119.20	118.76	119.02	118.72	119.12	118.87	119.05	117.54	115.23	111.22
11.00	DISCHG	107.72	103.43	100.18	96.74	94.68	92.27	91.53	90.74	91.19	91.11
12.00	DISCHG	92.09	91.89	92.11	91.32	91.21	90.16	90.36	90.24	91.09	91.38
13.00	DISCHG	92.49	92.18	91.11	87.57	83.55	78.55	74.85	72.28	72.71	74.21
14.00	DISCHG	77.21	80.05	83.56	86.12	88.87	90.59	91.81	90.69	88.10	83.69

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TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 1
REV PC 09/83(.2)	EXISTING CONDITIONS : XSI_OUT.TXT		PAGE 16

15.00	DISCHG	79.37	74.88	71.57	68.60	66.81	65.16	64.41	63.54	63.32	62.84
16.00	DISCHG	62.88	62.58	62.71	62.50	62.67	62.50	62.69	62.55	62.74	62.61
17.00	DISCHG	62.79	62.67	62.85	62.74	62.92	62.81	62.98	62.88	63.04	62.95
18.00	DISCHG	63.11	63.02	63.17	63.09	63.23	63.16	63.30	63.23	63.36	63.30
19.00	DISCHG	63.41	63.23	62.82	61.59	60.11	58.36	56.58	54.11	51.09	47.53
20.00	DISCHG	44.20	41.18	39.22	38.31	38.41	38.91	40.00	41.40	43.20	45.03
21.00	DISCHG	46.85	48.11	48.79	48.71	48.24	47.45	46.80	46.24	45.93	45.68
22.00	DISCHG	45.62	45.41	45.02	44.22	43.29	42.23	41.34	40.54	39.99	39.53
23.00	DISCHG	39.26	39.09	39.23	39.65	40.34	41.03	41.64	41.52	40.43	38.62
24.00	DISCHG	36.57	34.06	30.73	26.40	21.56	16.79	12.63	9.19	6.56	4.57
25.00	DISCHG	3.15	2.13	1.45	.95	.64	.41	.28	.17	.12	.06
26.00	DISCHG	.05	.02	.02	.00						

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	374.84	(RUNOFF)
10.43	16.32	(RUNOFF)
11.64	14.65	(RUNOFF)
12.64	14.77	(RUNOFF)
14.14	14.82	(RUNOFF)
18.90	8.73	(RUNOFF)
20.67	7.61	(RUNOFF)
21.63	6.69	(RUNOFF)
23.55	6.40	(RUNOFF)

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	298.95	5325.39
10.56	16.30	5320.56
11.83	13.86	5320.50
12.83	13.94	5320.50
14.35	13.79	5320.49
19.05	8.73	5320.35
21.81	6.54	5320.26
23.71	6.12	5320.25

OPERATION RESVOR STRUCTURE 45

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	298.95	5343.37
10.58	16.31	5340.24
11.83	13.86	5340.21
12.83	13.94	5340.21
14.35	13.78	5340.20
19.05	8.73	5340.13
21.81	6.54	5340.10
23.71	6.12	5340.09

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .54 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .16 2.41 12.78		
6.00	DISCHG 43.03 101.00 177.92 252.55 294.06 296.43 269.96 230.23 190.75 155.46		
7.00	DISCHG 125.86 102.14 84.42 70.69 61.23 54.06 49.40 45.66 43.11 40.57		
8.00	DISCHG 38.65 36.72 35.26 33.38 31.32 28.63 26.07 23.52 21.62 19.98		
9.00	DISCHG 18.90 17.97 17.44 16.95 16.72 16.47 16.39 16.26 16.26 16.20		
10.00	DISCHG 16.23 16.20 16.25 16.23 16.28 16.27 16.31 16.21 15.92 15.19		
11.00	DISCHG 14.19 13.00 11.99 11.39 11.39 11.88 12.67 13.41 13.84 13.71		
12.00	DISCHG 13.14 12.30 11.52 11.10 11.23 11.82 12.67 13.46 13.92 13.81		
13.00	DISCHG 13.24 12.41 11.53 10.76 10.14 9.66 9.31 9.15 9.32 9.94		
14.00	DISCHG 10.93 12.08 13.12 13.71 13.72 13.22 12.44 11.59 10.84 10.23		
15.00	DISCHG 9.76 9.41 9.15 8.97 8.84 8.75 8.69 8.65 8.62 8.60		
16.00	DISCHG 8.59 8.59 8.59 8.59 8.59 8.60 8.60 8.61 8.61 8.62		
17.00	DISCHG 8.62 8.63 8.63 8.64 8.64 8.65 8.65 8.66 8.66 8.67		
18.00	DISCHG 8.67 8.68 8.68 8.69 8.69 8.70 8.70 8.71 8.71 8.72		
19.00	DISCHG 8.72 8.72 8.69 8.55 8.24 7.80 7.30 6.80 6.33 5.85		
20.00	DISCHG 5.39 4.97 4.66 4.59 4.82 5.33 5.97 6.57 6.97 7.10		
21.00	DISCHG 6.99 6.74 6.46 6.26 6.19 6.24 6.36 6.48 6.54 6.50		
22.00	DISCHG 6.36 6.17 5.98 5.81 5.68 5.58 5.50 5.44 5.40 5.38		
23.00	DISCHG 5.36 5.35 5.36 5.42 5.56 5.76 5.98 6.12 6.03 5.58		
24.00	DISCHG 4.84 3.95 3.07 2.33 1.73 1.26 .90 .64 .44 .31		
25.00	DISCHG .21 .14 .09 .06 .04 .02 .01 .01 .00		

OPERATION RESVOR STRUCTURE 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	299.09	5343.57
10.52	16.31	5340.29
11.83	13.85	5340.25
12.84	13.93	5340.25
14.35	13.78	5340.25
19.05	8.73	5340.16
21.81	6.54	5340.12
23.71	6.12	5340.11

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.54 SQ.MI.
5.00	DISCHG	.00	.00	.00	.15	2.32
		.00	.00	.00		12.43

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TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 1
REV PC 09/83(.2)	EXISTING CONDITIONS : XSL_OUT.TXT		PAGE 18

6.00	DISCHG	42.09	99.45	175.08	250.77	293.24	297.01	270.96	231.63	191.79	156.57
7.00	DISCHG	126.57	102.71	84.62	71.07	61.27	54.32	49.36	45.86	43.04	40.74
8.00	DISCHG	38.58	36.87	35.18	33.53	31.27	28.79	26.03	23.66	21.57	20.10
9.00	DISCHG	18.84	18.06	17.37	17.03	16.65	16.53	16.33	16.32	16.21	16.25
10.00	DISCHG	16.18	16.25	16.20	16.27	16.24	16.31	16.27	16.25	15.90	15.24
11.00	DISCHG	14.18	13.05	11.99	11.42	11.36	11.89	12.63	13.42	13.82	13.73
12.00	DISCHG	13.14	12.33	11.52	11.12	11.21	11.81	12.63	13.45	13.90	13.83
13.00	DISCHG	13.25	12.44	11.54	10.78	10.15	9.67	9.31	9.16	9.31	9.92
14.00	DISCHG	10.90	12.05	13.10	13.71	13.72	13.24	12.45	11.61	10.85	10.24
15.00	DISCHG	9.77	9.41	9.15	8.97	8.84	8.75	8.69	8.65	8.62	8.60
16.00	DISCHG	8.59	8.59	8.59	8.59	8.59	8.60	8.60	8.61	8.61	8.62
17.00	DISCHG	8.62	8.63	8.63	8.64	8.64	8.65	8.65	8.66	8.66	8.67
18.00	DISCHG	8.67	8.68	8.68	8.69	8.69	8.70	8.70	8.71	8.71	8.72
19.00	DISCHG	8.72	8.72	8.69	8.55	8.25	7.81	7.31	6.81	6.34	5.86
20.00	DISCHG	5.40	4.97	4.66	4.58	4.82	5.32	5.95	6.56	6.97	7.10
21.00	DISCHG	6.99	6.74	6.47	6.26	6.19	6.23	6.35	6.48	6.54	6.50
22.00	DISCHG	6.37	6.18	5.99	5.82	5.68	5.58	5.50	5.44	5.41	5.38
23.00	DISCHG	5.36	5.35	5.36	5.42	5.55	5.76	5.98	6.12	6.04	5.60
24.00	DISCHG	4.85	3.97	3.09	2.35	1.74	1.27	.91	.64	.45	.31
25.00	DISCHG	.21	.14	.09	.06	.04	.02	.01	.01	.00	

OPERATION RESVOR STRUCTURE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	299.14	5325.15
10.57	16.31	5320.44
11.83	13.86	5320.37
12.84	13.94	5320.37
14.36	13.78	5320.37
19.05	8.73	5320.23
21.81	6.54	5320.17
23.72	6.12	5320.16

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.54 SQ.MI.
5.00	DISCHG	.00	.00	.00	.14	2.20
		.00	.00	.00		11.93
6.00	DISCHG	40.74	95.95	169.32	246.07	291.57
7.00	DISCHG	128.47	103.91	85.72	71.55	61.45
8.00	DISCHG	38.61	36.95	35.22	33.60	31.35
						28.87
						26.13
						23.72
						21.64
						20.12

9.00	DISCHG	18.89	18.06	17.42	17.01	16.69	16.51	16.37	16.29	16.24	16.22
10.00	DISCHG	16.21	16.21	16.23	16.24	16.27	16.28	16.30	16.23	15.94	15.24
11.00	DISCHG	14.25	13.06	12.04	11.41	11.38	11.85	12.63	13.38	13.83	13.73
12.00	DISCHG	13.18	12.35	11.56	11.11	11.21	11.77	12.62	13.42	13.91	13.83
13.00	DISCHG	13.29	12.45	11.58	10.79	10.17	9.68	9.33	9.15	9.30	9.89
14.00	DISCHG	10.87	12.01	13.07	13.69	13.74	13.26	12.49	11.64	10.88	10.26
15.00	DISCHG	9.78	9.42	9.16	8.97	8.85	8.75	8.69	8.65	8.62	8.60
16.00	DISCHG	8.59	8.59	8.59	8.59	8.59	8.60	8.60	8.61	8.61	8.62
17.00	DISCHG	8.62	8.63	8.63	8.64	8.64	8.65	8.65	8.66	8.66	8.67
18.00	DISCHG	8.67	8.68	8.68	8.69	8.69	8.70	8.70	8.71	8.71	8.72

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 1
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19.00	DISCHG	8.72	8.72	8.69	8.56	8.26	7.83	7.33	6.83	6.35	5.88
20.00	DISCHG	5.42	4.99	4.67	4.58	4.80	5.30	5.93	6.54	6.96	7.10
21.00	DISCHG	7.00	6.75	6.47	6.27	6.19	6.23	6.35	6.48	6.54	6.50
22.00	DISCHG	6.37	6.19	5.99	5.82	5.69	5.58	5.50	5.45	5.41	5.38
23.00	DISCHG	5.36	5.35	5.36	5.41	5.55	5.75	5.97	6.12	6.05	5.62
24.00	DISCHG	4.88	4.00	3.12	2.37	1.76	1.28	.92	.65	.45	.31
25.00	DISCHG	.21	.14	.10	.06	.04	.02	.01	.01	.00	

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	196.37	(RUNOFF)
7.47	15.37	(RUNOFF)
10.44	6.54	(RUNOFF)
11.54	6.28	(RUNOFF)
12.54	6.36	(RUNOFF)
14.04	6.42	(RUNOFF)
18.95	3.51	(RUNOFF)
20.56	3.33	(RUNOFF)
23.48	2.70	(RUNOFF)

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	170.90	5349.58
10.55	6.55	5340.46
11.68	6.11	5340.43
12.68	6.20	5340.43
14.18	6.24	5340.44
19.05	3.51	5340.25
23.61	2.64	5340.19

OPERATION RESVOR STRUCTURE 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	171.54	5347.08
7.66	15.43	5340.67
10.53	6.54	5340.28
11.68	6.11	5340.27

12.69	6.19	5340.27
14.19	6.24	5340.27
19.05	3.51	5340.15
23.62	2.64	5340.11

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.22 SQ.MI.
5.00 DISCHG	.00 .00	.00 .00	.00 .00	.00 .00	.03 2.12	15.93

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TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 1
REV PC 09/83(.2)	EXISTING CONDITIONS : XSI_OUT.TXT	PAGE 20	

6.00	DISCHG	51.85	107.00	158.22	170.59	140.09	99.69	68.75	49.70	36.33	28.20
7.00	DISCHG	22.23	19.28	17.00	16.25	15.50	15.57	15.29	15.38	14.77	14.26
8.00	DISCHG	13.50	13.20	12.59	11.62	10.01	8.71	7.68	7.16	6.75	6.63
9.00	DISCHG	6.47	6.47	6.41	6.44	6.41	6.45	6.43	6.46	6.45	6.48
10.00	DISCHG	6.47	6.50	6.49	6.52	6.52	6.54	6.53	6.42	5.93	5.19
11.00	DISCHG	4.48	4.00	3.83	4.15	4.81	5.47	5.94	6.11	5.79	5.12
12.00	DISCHG	4.47	4.01	3.84	4.17	4.86	5.53	6.01	6.19	5.86	5.17
13.00	DISCHG	4.51	4.04	3.75	3.58	3.49	3.43	3.41	3.52	4.03	4.81
14.00	DISCHG	5.54	6.05	6.24	5.92	5.25	4.58	4.10	3.81	3.63	3.53
15.00	DISCHG	3.48	3.45	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.44
16.00	DISCHG	3.44	3.44	3.44	3.44	3.45	3.45	3.45	3.45	3.45	3.46
17.00	DISCHG	3.46	3.46	3.46	3.47	3.47	3.47	3.47	3.47	3.48	3.48
18.00	DISCHG	3.48	3.48	3.48	3.49	3.49	3.49	3.49	3.49	3.50	3.50
19.00	DISCHG	3.50	3.50	3.46	3.24	2.92	2.61	2.40	2.25	2.07	1.86
20.00	DISCHG	1.69	1.57	1.58	1.86	2.32	2.77	3.08	3.21	3.12	2.86
21.00	DISCHG	2.59	2.40	2.31	2.35	2.47	2.60	2.69	2.72	2.65	2.51
22.00	DISCHG	2.37	2.27	2.21	2.17	2.15	2.14	2.14	2.13	2.13	2.13
23.00	DISCHG	2.13	2.14	2.16	2.26	2.41	2.55	2.64	2.59	2.22	1.62
24.00	DISCHG	1.05	.65	.39	.24	.14	.08	.04	.02	.01	.00

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	558.95	(RUNOFF)
10.40	20.75	(RUNOFF)
11.66	18.32	(RUNOFF)
12.65	18.40	(RUNOFF)
14.16	18.32	(RUNOFF)
18.87	10.83	(RUNOFF)
20.69	9.30	(RUNOFF)
21.64	8.22	(RUNOFF)
23.56	7.81	(RUNOFF)

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	445.02	5464.73
10.55	20.73	5460.61
11.85	17.30	5460.55
12.86	17.30	5460.55
14.38	16.96	5460.54
19.02	10.82	5460.42
21.83	8.05	5460.32

23.72

7.46

5460.30

OPERATION RESVOR STRUCTURE 28

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	445.17	5258.30
10.55	20.74	5251.38
11.87	17.29	5251.15
12.87	17.30	5251.15
14.40	16.96	5251.13
19.04	10.82	5250.72
21.84	8.05	5250.54
23.74	7.45	5250.50

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .56 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .60 6.25 27.14		
6.00	DISCHG 66.68 132.41 223.85 369.83 431.88 444.37 415.59 363.32 308.02 266.17		
7.00	DISCHG 215.55 183.92 154.74 124.52 104.38 89.31 75.88 68.64 62.81 58.23		
8.00	DISCHG 54.33 51.02 48.23 45.65 42.86 39.68 36.28 32.98 30.08 27.16		
9.00	DISCHG 25.65 24.12 23.18 22.39 21.87 21.47 21.20 21.01 20.89 20.80		
10.00	DISCHG 20.75 20.72 20.71 20.71 20.72 20.73 20.73 20.66 20.37 19.70		
11.00	DISCHG 18.62 17.31 16.03 15.08 14.74 15.02 15.72 16.55 17.16 17.26		
12.00	DISCHG 16.81 15.99 15.07 14.41 14.29 14.73 15.55 16.48 17.15 17.28		
13.00	DISCHG 16.85 16.04 15.04 14.08 13.26 12.59 12.07 11.75 11.76 12.26		
14.00	DISCHG 13.22 14.47 15.74 16.65 16.96 16.66 15.92 14.99 14.07 13.28		
15.00	DISCHG 12.63 12.12 11.73 11.44 11.23 11.08 10.96 10.88 10.83 10.79		
16.00	DISCHG 10.76 10.74 10.73 10.73 10.73 10.73 10.73 10.73 10.73 10.74		
17.00	DISCHG 10.74 10.74 10.75 10.75 10.76 10.76 10.76 10.77 10.77 10.78		
18.00	DISCHG 10.78 10.78 10.79 10.79 10.80 10.80 10.80 10.81 10.81 10.81		
19.00	DISCHG 10.82 10.82 10.79 10.67 10.38 9.93 9.37 8.78 8.20 7.62		
20.00	DISCHG 7.05 6.51 6.07 5.85 5.96 6.40 7.05 7.74 8.30 8.58		
21.00	DISCHG 8.59 8.39 8.11 7.85 7.72 7.72 7.81 7.95 8.04 8.03		
22.00	DISCHG 7.92 7.73 7.51 7.30 7.12 6.98 6.86 6.78 6.72 6.67		
23.00	DISCHG 6.64 6.62 6.61 6.66 6.78 6.99 7.23 7.43 7.42 7.06		
24.00	DISCHG 6.34 5.39 4.38 3.44 2.65 2.00 1.48 1.09 .79 .56		
25.00	DISCHG .40 .28 .20 .14 .09 .06 .04 .02 .01 .01		
26.00	DISCHG .01		

OPERATION REACH CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.70	396.37	5327.16
12.04	16.88	5320.82
13.06	16.84	5320.82
14.60	16.37	5320.81
19.16	10.82	5320.63
22.00	7.99	5320.48
23.90	7.30	5320.44

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 1
REV PC 09/83(.2) EXISTING CONDITIONS : XSL_OUT.TXT PAGE 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	438.85	(RUNOFF)
10.40	13.05	(RUNOFF)
11.57	12.24	(RUNOFF)
12.57	12.31	(RUNOFF)
14.07	12.39	(RUNOFF)
18.87	6.80	(RUNOFF)
20.59	6.29	(RUNOFF)
21.56	5.30	(RUNOFF)
23.50	5.12	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	497.24	5328.27
6.61	481.46	5328.10
11.50	27.66	5321.17
12.57	27.03	5321.15
14.15	25.05	5321.09
18.92	17.60	5320.85
21.46	13.17	5320.70
23.53	11.84	5320.66

OPERATION RESVOR STRUCTURE 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	456.77	5342.34
11.53	27.64	5322.06
12.60	26.99	5322.04
14.17	25.02	5321.92
18.94	17.60	5321.35
21.48	13.16	5321.01
23.55	11.87	5320.91

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .91 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	2.04	20.45	70.25	145.96
6.00	DISCHG	198.58	270.62	342.03	388.01	411.75	428.80	444.31	455.11	455.22	442.48
7.00	DISCHG	419.28	388.68	353.71	317.78	282.45	248.91	218.43	191.32	170.14	136.94
8.00	DISCHG	101.81	91.55	84.23	76.17	68.47	63.41	59.02	55.14	51.48	48.09
9.00	DISCHG	44.93	42.26	40.15	38.46	37.17	36.19	35.46	34.92	34.54	34.27
10.00	DISCHG	34.08	33.95	33.87	33.82	33.80	33.78	33.59	32.78	31.31	29.70
11.00	DISCHG	28.31	27.30	26.89	27.10	27.46	27.63	27.59	27.13	26.23	25.19
12.00	DISCHG	24.65	24.39	24.74	25.56	26.29	26.75	26.99	26.74	26.00	25.04
13.00	DISCHG	24.63	24.17	23.61	22.84	21.98	21.13	20.60	20.85	21.89	23.10
14.00	DISCHG	24.12	24.88	25.01	24.60	24.18	23.96	23.77	23.33	22.68	21.91
15.00	DISCHG	21.11	20.36	19.71	19.17	18.74	18.40	18.14	17.95	17.80	17.70

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 1
PAGE 23

16.00	DISCHG	17.62	17.56	17.53	17.50	17.49	17.48	17.48	17.48	17.48	17.48
17.00	DISCHG	17.49	17.49	17.50	17.50	17.51	17.52	17.52	17.53	17.53	17.54
18.00	DISCHG	17.55	17.55	17.56	17.57	17.57	17.58	17.59	17.59	17.60	17.60
19.00	DISCHG	17.60	17.50	17.13	16.48	15.81	15.25	14.70	13.98	13.10	12.22
20.00	DISCHG	11.44	10.91	10.86	11.27	11.78	12.18	12.50	12.61	12.56	12.53
21.00	DISCHG	12.60	12.71	12.86	13.03	13.14	13.16	13.12	12.96	12.72	12.50
22.00	DISCHG	12.35	12.22	12.07	11.89	11.69	11.50	11.33	11.18	11.06	10.96
23.00	DISCHG	10.89	10.88	11.01	11.28	11.57	11.80	11.82	11.31	10.30	9.25
24.00	DISCHG	8.39	7.61	6.76	5.79	4.82	3.91	3.10	2.41	1.85	1.39
25.00	DISCHG	1.04	.76	.56	.40	.29	.20	.14	.09	.06	.04
26.00	DISCHG	.03	.02	.01	.00						

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	452.96	5326.83
11.66	27.60	5320.98
12.74	26.84	5320.96
14.32	24.83	5320.91
19.05	17.61	5320.71
21.64	13.14	5320.59
23.67	11.78	5320.55

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	501.62	(RUNOFF)
7.45	25.19	(RUNOFF)
10.45	10.44	(RUNOFF)
11.46	10.41	(RUNOFF)
12.46	10.45	(RUNOFF)
13.96	10.51	(RUNOFF)
18.86	5.28	(RUNOFF)
20.46	5.31	(RUNOFF)
21.46	4.26	(RUNOFF)
23.45	4.26	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 8

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 1
PAGE 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.03	624.48	5328.69
6.88	478.13	5327.08
11.47	37.69	5321.26

12.50	36.26	5321.22
14.03	33.01	5321.13
18.94	22.87	5320.85
20.53	16.86	5320.69
21.49	17.31	5320.70
23.48	15.61	5320.65

EXECUTIVE CONTROL OPERATION ENDCMP	RECORD ID
COMPUTATIONS COMPLETED FOR PASS 1	

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

EXECUTIVE CONTROL OPERATION COMPUT	RECORD ID
FROM XSECTION 54	
TO XSECTION 8	
STARTING TIME = .00 RAIN DEPTH = 3.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2	
ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .10 HOURS	

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	684.06	(RUNOFF)
7.46	45.93	(RUNOFF)
10.41	19.23	(RUNOFF)
11.52	18.64	(RUNOFF)
12.52	18.79	(RUNOFF)
14.02	18.99	(RUNOFF)
18.91	10.12	(RUNOFF)
20.53	9.71	(RUNOFF)
21.51	8.00	(RUNOFF)
23.47	7.86	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 2
REV PC 09/83(.2)	EXISTING CONDITIONS : XS1_OUT.TXT	PAGE 25

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	318.40	(RUNOFF)
7.46	19.38	(RUNOFF)
10.40	8.04	(RUNOFF)
11.50	7.86	(RUNOFF)
12.50	7.91	(RUNOFF)
14.00	7.97	(RUNOFF)
18.88	4.20	(RUNOFF)
20.52	4.06	(RUNOFF)
23.46	3.28	(RUNOFF)

...OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	1001.27	5729.91
7.46	65.31	5721.70
10.41	27.28	5720.79
11.51	26.49	5720.77
12.51	26.69	5720.78
14.01	26.95	5720.78
18.90	14.31	5720.50
20.53	13.77	5720.48
21.51	11.32	5720.43
23.47	11.14	5720.43

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

...OPERATION REACH CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	954.15	5729.51
7.56	65.27	5721.70
10.53	27.27	5720.79
11.64	26.21	5720.76
12.64	26.41	5720.77
14.14	26.66	5720.77
19.01	14.31	5720.50
20.65	13.67	5720.48
21.63	11.26	5720.43
23.58	11.04	5720.42

...OPERATION RUNOFF CROSS SECTION 44

1

...TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 2
 PAGE 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	79.24	(RUNOFF)
7.47	7.50	(RUNOFF)
10.45	3.24	(RUNOFF)
11.56	3.08	(RUNOFF)
12.56	3.11	(RUNOFF)
14.07	3.16	(RUNOFF)
23.49	1.34	(RUNOFF)

...OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1031.59	5730.17
7.55	72.76	5721.89
10.48	30.50	5720.86

11.63	29.22	5720.83
12.63	29.45	5720.84
14.13	29.76	5720.84
18.96	16.07	5720.54
20.65	15.23	5720.52
21.62	12.63	5720.46
23.57	12.36	5720.45

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 42 BY 31.6 CFS

*** WARNING REACH 42 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	995.64	5670.26
10.58	30.49	5660.91
11.75	28.98	5660.87
12.75	29.22	5660.88
14.25	29.51	5660.89
19.07	16.07	5660.55
20.76	15.14	5660.53
21.74	12.58	5660.46
23.68	12.27	5660.46

OPERATION RUNOFF CROSS SECTION 42

1

TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 2
REV PC 09/83(.2)	EXISTING CONDITIONS : XSL_OUT.TXT	PAGE 27

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	175.42	(RUNOFF)
10.45	7.16	(RUNOFF)
11.58	6.68	(RUNOFF)
12.58	6.77	(RUNOFF)
14.08	6.84	(RUNOFF)
18.95	3.87	(RUNOFF)
23.51	2.92	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	1135.43	5671.49
10.47	37.61	5661.09
11.71	35.13	5661.03
12.71	35.43	5661.04
14.21	35.78	5661.04
18.96	19.92	5660.65
20.74	18.40	5660.61
21.71	15.48	5660.54
23.63	14.86	5660.52

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	155.06	(RUNOFF)
10.45	7.80	(RUNOFF)
11.57	7.35	(RUNOFF)
12.57	7.48	(RUNOFF)
14.08	7.62	(RUNOFF)
18.93	4.33	(RUNOFF)
20.60	4.00	(RUNOFF)
23.51	3.31	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	1265.89	5672.64
10.46	45.41	5661.29
11.69	42.05	5661.20
12.68	42.44	5661.21
14.19	42.91	5661.22
18.95	24.26	5660.76
20.71	22.18	5660.70
21.68	18.77	5660.62
23.59	18.05	5660.60

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 40 BY 265.1 CFS

OPERATION REACH CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	1120.59	5592.13
10.58	45.35	5581.37
11.85	40.65	5581.24
12.85	41.05	5581.25
14.35	41.46	5581.27
19.06	24.24	5580.79
20.88	21.39	5580.71
21.84	18.50	5580.63
23.74	17.61	5580.61

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	268.50	(RUNOFF)
10.45	12.59	(RUNOFF)
11.60	11.55	(RUNOFF)
12.60	11.68	(RUNOFF)
14.11	11.79	(RUNOFF)
18.90	6.83	(RUNOFF)
20.64	6.13	(RUNOFF)

21.60 5.30 (RUNOFF)
23.53 5.09 (RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
PAGE 29

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.42	1294.21	5593.77
10.48	57.86	5581.74
11.80	50.59	5581.52
12.80	51.12	5581.53
14.30	51.55	5581.55
18.96	31.06	5580.98
20.84	26.76	5580.86
21.79	23.45	5580.77
23.66	22.17	5580.73

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 18 BY 287.9 CFS

OPERATION REACH CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.61	1138.89	5486.88
10.62	57.77	5480.81
11.97	48.97	5480.69
12.97	49.47	5480.69
14.49	49.59	5480.69
19.08	31.04	5480.46
21.04	25.73	5480.40
21.95	23.17	5480.36
23.81	21.61	5480.35

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	223.38	(RUNOFF)
10.46	12.18	(RUNOFF)
11.70	10.51	(RUNOFF)
12.71	10.52	(RUNOFF)
14.22	10.51	(RUNOFF)
18.91	6.54	(RUNOFF)
23.58	4.62	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
PAGE 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.58	1297.27	5487.77
10.54	69.87	5480.98
11.94	58.26	5480.82
12.94	58.83	5480.82
14.46	58.88	5480.82
18.98	37.57	5480.54
21.01	30.67	5480.46
21.91	27.87	5480.42
23.75	25.78	5480.40

*** WARNING - STRUCTURE 42 DELTA T IS TOO LARGE. O / 2 > S / DELTA T OCCURED 3 TIMES STARTING WITH POINT260

PERATION RESVOR STRUCTURE 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	1121.24	5262.94
10.56	69.89	5251.55
11.96	58.23	5251.29
12.96	58.80	5251.31
14.48	58.83	5251.31
19.00	37.56	5250.83
21.04	30.64	5250.68
21.93	27.85	5250.62
23.77	25.75	5250.57

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 2.61 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.15	2.01	10.72	38.86
6.00	DISCHG	103.90	222.50	401.94	626.38	833.11	958.52	1067.80	1115.91	1113.97	1062.17
7.00	DISCHG	934.00	777.62	491.46	344.90	278.29	229.62	205.87	188.52	177.98	170.54
8.00	DISCHG	164.73	159.20	153.22	146.52	138.95	130.43	120.76	110.16	99.76	90.77
9.00	DISCHG	83.09	78.26	74.72	72.50	71.06	70.22	69.73	69.48	69.37	69.36
10.00	DISCHG	69.39	69.46	69.55	69.64	69.74	69.84	69.86	69.62	68.77	66.96
11.00	DISCHG	64.12	60.28	55.88	51.99	49.63	49.15	50.57	53.35	56.19	57.94
12.00	DISCHG	58.08	56.47	53.63	50.76	49.04	48.97	50.69	53.65	56.63	58.48
13.00	DISCHG	58.64	56.93	53.69	49.81	46.13	43.10	40.91	39.68	39.59	40.85
14.00	DISCHG	43.42	47.20	51.69	55.72	58.22	58.78	57.30	54.16	50.33	46.66
15.00	DISCHG	43.61	41.32	39.70	38.62	37.91	37.47	37.21	37.06	36.98	36.94
16.00	DISCHG	36.93	36.93	36.94	36.95	36.97	37.00	37.02	37.04	37.06	37.09
17.00	DISCHG	37.11	37.13	37.16	37.18	37.20	37.23	37.25	37.27	37.30	37.32
18.00	DISCHG	37.34	37.36	37.39	37.41	37.43	37.46	37.48	37.50	37.52	37.55
19.00	DISCHG	37.56	37.55	37.41	37.02	36.23	34.99	33.27	31.14	28.84	26.59
20.00	DISCHG	24.51	22.64	21.09	20.17	20.14	21.08	22.97	25.47	27.94	29.74
21.00	DISCHG	30.58	30.44	29.55	28.39	27.42	26.89	26.85	27.18	27.60	27.84
22.00	DISCHG	27.77	27.35	26.62	25.78	25.00	24.35	23.87	23.53	23.31	23.16
23.00	DISCHG	23.08	23.04	23.08	23.26	23.63	24.19	24.90	25.54	25.71	24.99
24.00	DISCHG	23.25	20.42	16.77	12.92	9.45	6.64	4.52	3.00	1.94	1.23

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 2
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25.00	DISCHG	.76	.46	.27	.15	.09	.05	.02	.01	.00
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OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	244.93	(RUNOFF)
10.43	11.24	(RUNOFF)
11.64	10.03	(RUNOFF)
12.65	10.11	(RUNOFF)
14.15	10.12	(RUNOFF)
18.89	6.03	(RUNOFF)
20.69	5.22	(RUNOFF)
23.56	4.39	(RUNOFF)

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	185.90	5605.04
10.56	11.23	5600.64
11.85	9.41	5600.56
12.86	9.43	5600.57
14.39	9.27	5600.56
19.05	6.02	5600.36
23.73	4.17	5600.25

OPERATION RESVOR STRUCTURE 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.60	177.05	5607.35
10.57	11.22	5600.86
11.86	9.40	5600.72
12.87	9.43	5600.73
14.40	9.27	5600.71
19.06	6.02	5600.46
23.74	4.17	5600.32

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .41 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.04	.80	5.37
6.00	DISCHG	19.88	46.16	86.24	124.53	157.03	172.60	177.05	172.34	155.79	129.09
7.00	DISCHG	104.22	87.00	70.40	58.40	50.30	43.77	39.04	35.49	32.78	30.55
8.00	DISCHG	28.66	27.04	25.59	24.15	22.74	21.00	19.24	17.51	16.03	14.81
9.00	DISCHG	13.85	13.10	12.54	12.13	11.83	11.61	11.46	11.35	11.28	11.24
10.00	DISCHG	11.21	11.20	11.19	11.20	11.20	11.22	11.22	11.19	11.04	10.68
11.00	DISCHG	10.11	9.41	8.72	8.23	8.07	8.22	8.59	9.03	9.34	9.38
12.00	DISCHG	9.14	8.70	8.22	7.89	7.83	8.07	8.51	8.99	9.35	9.42
13.00	DISCHG	9.19	8.76	8.24	7.74	7.30	6.94	6.66	6.48	6.48	6.75

1

14.00	DISCHG	7.27	7.95	8.62	9.10	9.27	9.12	8.73	8.25	7.77	7.34
15.00	DISCHG	7.00	6.72	6.51	6.34	6.22	6.13	6.07	6.02	5.99	5.97
16.00	DISCHG	5.95	5.94	5.94	5.93	5.93	5.93	5.94	5.94	5.94	5.95
17.00	DISCHG	5.95	5.95	5.96	5.96	5.96	5.97	5.97	5.97	5.98	5.98

18.00	DISCHG	5.98	5.99	5.99	6.00	6.00	6.00	6.01	6.01	6.01	6.02
19.00	DISCHG	6.02	6.02	6.01	5.94	5.78	5.53	5.23	4.91	4.59	4.28
20.00	DISCHG	3.96	3.66	3.41	3.29	3.35	3.59	3.94	4.32	4.62	4.77
21.00	DISCHG	4.77	4.67	4.52	4.39	4.32	4.32	4.37	4.44	4.49	4.49
22.00	DISCHG	4.42	4.32	4.20	4.09	3.99	3.92	3.85	3.81	3.77	3.74
23.00	DISCHG	3.73	3.71	3.71	3.74	3.80	3.92	4.05	4.16	4.15	3.95
24.00	DISCHG	3.55	3.03	2.48	1.97	1.53	1.17	.88	.65	.48	.35
25.00	DISCHG	.25	.18	.13	.09	.06	.04	.03	.02	.01	.01
26.00	DISCHG	.00									

OPERATION REACH CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	163.47	5464.33
10.68	11.22	5460.54
12.04	9.18	5460.46
13.06	9.17	5460.46
14.61	8.94	5460.45
19.18	6.02	5460.30
23.90	4.08	5460.20

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	392.90	(RUNOFF)
7.45	24.71	(RUNOFF)
10.40	10.25	(RUNOFF)
11.52	9.89	(RUNOFF)
12.52	9.97	(RUNOFF)
14.02	10.02	(RUNOFF)
18.90	5.34	(RUNOFF)
20.54	5.10	(RUNOFF)
23.47	4.13	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
PAGE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	402.10	5466.72
6.71	198.70	5464.69
11.46	18.47	5460.77
12.50	18.06	5460.76
14.05	16.85	5460.72
18.95	11.37	5460.54
21.46	8.64	5460.43
23.48	7.88	5460.39

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.74	1319.68	5487.89
10.47	91.31	5481.28
11.94	73.07	5481.02
12.94	73.61	5481.03
14.47	73.34	5481.03
18.96	48.93	5480.69
21.05	38.56	5480.56
21.89	35.69	5480.52
23.61	32.54	5480.48

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 6 BY 314.6 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.92	1283.35	5330.45
10.58	91.23	5321.81
12.09	72.48	5321.39
13.09	72.94	5321.40
14.64	72.22	5321.39
19.07	48.90	5320.88
21.24	38.02	5320.72
22.00	35.64	5320.68
23.76	32.22	5320.63

OPERATION RUNOFF CROSS SECTION 6

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 2
PAGE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	359.01	(RUNOFF)
10.45	13.31	(RUNOFF)
11.58	12.31	(RUNOFF)
12.58	12.43	(RUNOFF)
14.09	12.52	(RUNOFF)
18.90	7.06	(RUNOFF)
20.61	6.42	(RUNOFF)
21.58	5.48	(RUNOFF)
23.51	5.28	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.90	1332.70	5330.83
10.48	104.43	5322.03
13.05	80.72	5321.58
14.61	79.87	5321.56
18.97	55.93	5321.03
21.28	42.87	5320.79
23.62	36.80	5320.70

OPERATION RESVOR STRUCTURE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.90	1331.96	5354.15
9.87	105.32	5350.45
10.50	104.74	5350.45
13.06	80.77	5350.35
14.61	79.83	5350.34
18.97	55.92	5350.24
21.29	42.87	5350.18
23.62	36.80	5350.16

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.25	9.94	62.71	200.41
6.00	DISCHG	419.00	662.95	848.73	926.20	975.59	1052.15	1147.22	1241.21	1308.87	1331.96
7.00	DISCHG	1309.51	1218.55	1079.26	852.34	652.44	522.60	425.26	367.08	321.76	294.62
8.00	DISCHG	271.63	258.63	243.00	230.80	214.58	203.12	189.09	178.58	164.58	153.68
9.00	DISCHG	140.82	131.96	122.75	117.90	112.35	110.35	107.19	106.78	104.93	105.26
10.00	DISCHG	104.09	104.73	103.90	104.64	104.00	104.74	103.94	103.45	100.46	97.83
11.00	DISCHG	93.96	91.18	87.75	85.88	83.54	82.31	80.83	80.58	79.82	80.08
12.00	DISCHG	80.04	80.51	80.29	80.61	80.24	80.12	79.73	79.94	79.78	80.21
13.00	DISCHG	80.48	80.67	79.42	77.08	73.45	69.75	66.25	64.50	64.51	66.12
14.00	DISCHG	68.24	70.89	73.31	75.52	77.32	79.01	79.82	79.35	77.14	73.94
15.00	DISCHG	70.14	66.62	63.47	61.07	59.16	57.87	56.88	56.28	55.81	55.57

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TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 2
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT PAGE 35

16.00	DISCHG	55.36	55.29	55.19	55.19	55.15	55.19	55.17	55.22	55.22	55.27
17.00	DISCHG	55.28	55.33	55.34	55.39	55.41	55.46	55.47	55.52	55.54	55.58
18.00	DISCHG	55.60	55.65	55.67	55.71	55.73	55.77	55.80	55.84	55.86	55.90
19.00	DISCHG	55.92	55.83	55.36	54.31	52.93	51.49	49.88	47.84	45.19	42.22
20.00	DISCHG	39.30	36.75	35.03	34.34	34.37	34.81	35.61	36.71	38.01	39.47
21.00	DISCHG	40.91	42.06	42.71	42.87	42.58	42.06	41.49	41.02	40.62	40.36
22.00	DISCHG	40.21	40.05	39.69	39.08	38.28	37.44	36.64	35.97	35.44	35.04
23.00	DISCHG	34.76	34.62	34.72	35.12	35.70	36.32	36.79	36.60	35.51	33.87
24.00	DISCHG	32.06	29.93	27.12	23.52	19.46	15.42	11.77	8.72	6.31	4.47
25.00	DISCHG	3.11	2.15	1.46	.98	.66	.44	.29	.19	.12	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.91	1332.39	5347.53
10.56	104.55	5340.93
13.04	80.68	5340.72
14.61	79.89	5340.71
18.98	55.93	5340.50
21.29	42.87	5340.38
23.62	36.80	5340.33

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.24	9.45	60.45	195.41
6.00	DISCHG	398.04	644.11	834.04	924.86	968.48	1044.53	1136.94	1231.13	1300.75	1331.93

7.00	DISCHG	1314.18	1234.66	1092.93	879.25	663.59	534.27	429.55	371.02	324.38	296.00
8.00	DISCHG	273.43	258.87	244.74	230.99	215.73	202.67	190.21	178.11	165.71	153.22
9.00	DISCHG	141.89	131.45	123.68	117.32	113.16	109.73	107.91	106.15	105.59	104.65
10.00	DISCHG	104.69	104.15	104.46	104.10	104.52	104.24	104.44	103.03	100.99	97.49
11.00	DISCHG	94.46	90.87	88.20	85.57	83.94	82.02	81.17	80.29	80.12	79.80
12.00	DISCHG	80.30	80.26	80.53	80.38	80.47	79.92	79.93	79.75	79.95	80.03
13.00	DISCHG	80.63	80.53	79.61	77.02	73.68	69.73	66.44	64.42	64.59	65.97
14.00	DISCHG	68.27	70.73	73.33	75.38	77.34	78.90	79.88	79.32	77.28	73.98
15.00	DISCHG	70.30	66.66	63.60	61.08	59.25	57.85	56.94	56.26	55.86	55.54
16.00	DISCHG	55.40	55.26	55.22	55.16	55.18	55.16	55.20	55.20	55.24	55.25
17.00	DISCHG	55.30	55.31	55.36	55.37	55.42	55.44	55.49	55.50	55.55	55.57
18.00	DISCHG	55.61	55.63	55.68	55.70	55.74	55.76	55.80	55.83	55.87	55.89
19.00	DISCHG	55.92	55.83	55.38	54.34	52.98	51.53	49.94	47.89	45.27	42.30
20.00	DISCHG	39.38	36.81	35.07	34.34	34.36	34.79	35.58	36.68	37.98	39.43
21.00	DISCHG	40.87	42.03	42.70	42.87	42.60	42.07	41.51	41.03	40.63	40.36
22.00	DISCHG	40.22	40.06	39.71	39.10	38.31	37.46	36.67	35.99	35.45	35.05
23.00	DISCHG	34.77	34.62	34.71	35.10	35.69	36.30	36.78	36.61	35.55	33.92
24.00	DISCHG	32.11	29.99	27.20	23.63	19.57	15.52	11.86	8.80	6.36	4.51
25.00	DISCHG	3.15	2.17	1.47	.99	.66	.44	.29	.19	.12	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

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TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 2
REV PC 09/83(.2)	EXISTING CONDITIONS : XSI_OUT.TXT		PAGE 36

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)		PEAK DISCHARGE(CFS)		PEAK ELEVATION(FEET)	
6.92		1330.79		5324.78	
9.77		106.25		5320.53	
9.99		105.18		5320.53	
10.20		104.86		5320.52	
10.58		104.77		5320.52	
13.04		80.66		5320.40	
14.62		79.85		5320.40	
18.96		55.92		5320.28	
21.29		42.88		5320.21	
23.63		36.79		5320.18	

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.23	9.19	59.20	192.63
6.00	DISCHG	394.72	632.29	832.92	920.34	969.81	1037.91	1135.00	1225.13	1300.13	1329.92
7.00	DISCHG	1317.31	1238.49	1101.22	887.18	669.70	536.74	433.73	369.93	326.78	294.58
8.00	DISCHG	275.43	257.42	246.53	229.72	217.38	201.50	191.68	177.09	167.04	152.33
9.00	DISCHG	143.05	130.66	124.65	116.59	113.97	109.07	108.59	105.57	106.15	104.15
10.00	DISCHG	105.17	103.72	104.86	103.74	104.85	103.94	104.71	102.81	101.25	97.34
11.00	DISCHG	94.69	90.76	88.39	85.48	84.07	81.95	81.26	80.23	80.19	79.75
12.00	DISCHG	80.33	80.23	80.55	80.36	80.48	79.93	79.92	79.76	79.94	80.04
13.00	DISCHG	80.60	80.56	79.60	77.10	73.70	69.82	66.45	64.47	64.53	65.98
14.00	DISCHG	68.19	70.73	73.26	75.40	77.27	78.92	79.83	79.38	77.28	74.07
15.00	DISCHG	70.32	66.75	63.61	61.15	59.24	57.90	56.92	56.30	55.83	55.58
16.00	DISCHG	55.37	55.29	55.20	55.19	55.15	55.19	55.17	55.22	55.22	55.27
17.00	DISCHG	55.28	55.33	55.34	55.39	55.40	55.46	55.47	55.52	55.53	55.58
18.00	DISCHG	55.60	55.65	55.66	55.71	55.73	55.78	55.79	55.84	55.86	55.90
19.00	DISCHG	55.91	55.84	55.38	54.37	52.99	51.56	49.95	47.94	45.30	42.35

20.00	DISCHG	39.42	36.85	35.08	34.35	34.35	34.78	35.56	36.67	37.95	39.41
21.00	DISCHG	40.85	42.02	42.69	42.87	42.60	42.08	41.51	41.04	40.63	40.37
22.00	DISCHG	40.22	40.06	39.71	39.11	38.32	37.47	36.67	36.00	35.46	35.06
23.00	DISCHG	34.77	34.62	34.71	35.10	35.67	36.29	36.77	36.63	35.57	33.95
24.00	DISCHG	32.13	30.03	27.25	23.69	19.63	15.58	11.91	8.84	6.40	4.54
25.00	DISCHG	3.16	2.18	1.48	1.00	.67	.45	.29	.19	.12	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 32

FR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.92	1330.48	5315.77
10.49	104.54	5310.55
13.08	80.90	5310.43
14.63	79.72	5310.42
18.95	55.91	5310.29
21.29	42.87	5310.23
23.63	36.79	5310.19

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.23	8.97	58.16	190.30
6.00	DISCHG	391.35	618.31	831.01	916.18	970.12	1033.11	1132.71	1221.12	1298.62	1329.25
7.00	DISCHG	1318.72	1242.50	1106.87	896.51	676.47	540.37	437.93	370.40	327.40	294.78
8.00	DISCHG	275.71	257.60	246.63	230.04	217.37	201.90	191.54	177.58	166.83	152.90
9.00	DISCHG	142.74	131.26	124.23	117.19	113.46	109.67	108.02	106.18	105.56	104.77
10.00	DISCHG	104.56	104.34	104.25	104.35	104.24	104.54	104.12	103.42	100.72	97.95
11.00	DISCHG	94.18	91.35	87.89	86.02	83.59	82.46	80.80	80.70	79.74	80.18
12.00	DISCHG	79.90	80.64	80.15	80.74	80.11	80.29	79.58	80.09	79.62	80.34
13.00	DISCHG	80.30	80.85	79.36	77.40	73.51	70.10	66.26	64.69	64.32	66.15
14.00	DISCHG	67.98	70.87	73.06	75.53	77.10	79.04	79.69	79.53	77.20	74.23
15.00	DISCHG	70.26	66.90	63.54	61.27	59.17	58.00	56.85	56.37	55.77	55.64
16.00	DISCHG	55.31	55.35	55.15	55.24	55.11	55.23	55.13	55.26	55.18	55.30
17.00	DISCHG	55.25	55.36	55.31	55.42	55.38	55.48	55.45	55.54	55.52	55.60
18.00	DISCHG	55.58	55.66	55.65	55.72	55.72	55.78	55.78	55.85	55.85	55.91
19.00	DISCHG	55.91	55.85	55.39	54.39	53.00	51.58	49.97	47.97	45.34	42.39
20.00	DISCHG	39.45	36.88	35.09	34.36	34.35	34.78	35.55	36.65	37.93	39.39
21.00	DISCHG	40.83	42.01	42.69	42.87	42.61	42.09	41.52	41.04	40.64	40.37
22.00	DISCHG	40.22	40.06	39.72	39.12	38.33	37.48	36.69	36.00	35.47	35.06
23.00	DISCHG	34.77	34.62	34.71	35.09	35.67	36.28	36.77	36.63	35.59	33.97
24.00	DISCHG	32.16	30.06	27.29	23.74	19.69	15.63	11.96	8.87	6.42	4.56
25.00	DISCHG	3.18	2.19	1.49	1.00	.67	.45	.30	.19	.13	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 31

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.92	1332.42	5304.78
9.88	105.51	5300.42
10.09	104.99	5300.42
10.30	104.94	5300.42

10.50	105.08	5300.42
10.66	104.28	5300.42
11.67	81.03	5300.32
13.08	80.94	5300.32
14.62	79.77	5300.32
18.99	55.95	5300.22

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
 PAGE 38

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.22	8.81	57.39	188.54
6.00	DISCHG	389.22	611.80	825.13	916.74	966.67	1032.86	1127.82	1220.97	1294.78	1331.12
7.00	DISCHG	1317.59	1247.43	1109.40	905.39	680.65	544.13	437.94	371.67	326.99	295.80
8.00	DISCHG	275.09	258.53	245.94	231.02	216.68	202.86	190.81	178.55	166.10	153.87
9.00	DISCHG	142.01	132.19	123.47	118.05	112.70	110.47	107.28	106.93	104.85	105.46
10.00	DISCHG	103.89	104.98	103.63	104.94	103.67	105.08	103.61	103.93	100.28	98.42
11.00	DISCHG	93.80	91.77	87.55	86.39	83.29	82.77	80.53	80.96	79.51	80.40
12.00	DISCHG	79.70	80.82	79.99	80.89	79.98	80.41	79.48	80.18	79.54	80.40
13.00	DISCHG	80.25	80.89	79.34	77.45	73.53	70.14	66.30	64.69	64.33	66.11
14.00	DISCHG	67.98	70.81	73.08	75.47	77.13	78.98	79.74	79.48	77.29	74.20
15.00	DISCHG	70.36	66.86	63.64	61.21	59.26	57.93	56.94	56.30	55.85	55.57
16.00	DISCHG	55.39	55.27	55.22	55.17	55.18	55.15	55.21	55.18	55.26	55.23
17.00	DISCHG	55.32	55.29	55.38	55.35	55.44	55.41	55.51	55.48	55.58	55.54
18.00	DISCHG	55.64	55.60	55.70	55.67	55.77	55.73	55.83	55.80	55.90	55.86
19.00	DISCHG	55.95	55.81	55.44	54.37	53.06	51.56	50.03	47.95	45.40	42.39
20.00	DISCHG	39.51	36.87	35.14	34.33	34.38	34.74	35.57	36.61	37.95	39.35
21.00	DISCHG	40.84	41.98	42.71	42.85	42.63	42.07	41.55	41.03	40.66	40.35
22.00	DISCHG	40.24	40.05	39.74	39.11	38.36	37.47	36.71	36.00	35.48	35.05
23.00	DISCHG	34.79	34.61	34.72	35.07	35.67	36.27	36.77	36.63	35.61	33.98
24.00	DISCHG	32.18	30.07	27.33	23.77	19.73	15.66	12.00	8.90	6.45	4.57
25.00	DISCHG	3.19	2.19	1.50	1.00	.68	.44	.30	.19	.13	.07
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	310.01	(RUNOFF)
10.43	14.25	(RUNOFF)
11.64	12.81	(RUNOFF)
12.64	12.93	(RUNOFF)
14.14	12.99	(RUNOFF)
18.90	7.67	(RUNOFF)
20.67	6.70	(RUNOFF)
21.63	5.88	(RUNOFF)
23.55	5.63	(RUNOFF)

OPERATION REACH CROSS SECTION 4

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW

JOB 1 PASS 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	242.79	5324.71
10.57	14.23	5320.51
11.83	12.07	5320.45
12.83	12.15	5320.45
14.36	12.01	5320.45
19.05	7.67	5320.31
21.81	5.75	5320.23
23.71	5.38	5320.21

OPERATION RESVOR STRUCTURE 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	242.36	5342.89
10.58	14.24	5340.21
11.83	12.08	5340.18
12.84	12.15	5340.18
14.36	12.01	5340.18
19.05	7.67	5340.11
21.81	5.75	5340.08
23.71	5.38	5340.08

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .54 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .08 1.44 8.43		
6.00	DISCHG 30.53 75.37 137.95 198.68 236.95 241.38 223.85 192.56 162.12 132.84		
7.00	DISCHG 108.79 89.05 73.92 62.22 53.89 47.66 43.43 40.16 37.80 35.59		
8.00	DISCHG 33.84 32.18 30.84 29.24 27.43 25.15 22.91 20.73 19.04 17.61		
9.00	DISCHG 16.61 15.80 15.29 14.86 14.62 14.41 14.31 14.21 14.19 14.14		
10.00	DISCHG 14.16 14.14 14.17 14.17 14.20 14.21 14.23 14.16 13.91 13.31		
11.00	DISCHG 12.45 11.44 10.57 10.03 10.00 10.40 11.05 11.68 12.05 11.96		
12.00	DISCHG 11.50 10.79 10.13 9.76 9.85 10.33 11.04 11.72 12.12 12.06		
13.00	DISCHG 11.60 10.90 10.15 9.48 8.94 8.52 8.20 8.05 8.18 8.69		
14.00	DISCHG 9.52 10.50 11.41 11.94 11.97 11.58 10.92 10.21 9.56 9.03		
15.00	DISCHG 8.61 8.30 8.06 7.90 7.78 7.69 7.63 7.59 7.57 7.55		
16.00	DISCHG 7.54 7.54 7.54 7.54 7.54 7.54 7.55 7.55 7.56 7.56		
17.00	DISCHG 7.57 7.57 7.58 7.58 7.59 7.59 7.60 7.60 7.61 7.61		
18.00	DISCHG 7.62 7.62 7.63 7.63 7.63 7.64 7.64 7.65 7.65 7.66		
19.00	DISCHG 7.66 7.67 7.64 7.52 7.26 6.88 6.45 6.02 5.61 5.19		
20.00	DISCHG 4.79 4.41 4.14 4.06 4.25 4.67 5.21 5.73 6.09 6.21		
21.00	DISCHG 6.13 5.92 5.69 5.52 5.45 5.49 5.59 5.70 5.75 5.72		
22.00	DISCHG 5.60 5.44 5.28 5.13 5.01 4.92 4.85 4.80 4.76 4.74		
23.00	DISCHG 4.72 4.71 4.72 4.77 4.89 5.06 5.25 5.37 5.30 4.93		
24.00	DISCHG 4.29 3.53 2.78 2.13 1.59 1.17 .85 .60 .43 .30		
25.00	DISCHG .21 .14 .09 .06 .04 .02 .01 .01 .00		

OPERATION RESVOR STRUCTURE 44

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	242.42	5343.10
10.53	14.23	5340.25
11.84	12.07	5340.22
12.84	12.15	5340.22
14.36	12.01	5340.21
19.05	7.67	5340.14
21.81	5.75	5340.10
23.72	5.38	5340.10

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.08	1.39	8.19
6.00	DISCHG	29.84	74.15	136.07	196.86	236.37	241.64	224.62	193.67	162.88	133.84
7.00	DISCHG	109.24	89.46	74.17	62.47	54.00	47.82	43.46	40.26	37.80	35.68
8.00	DISCHG	33.83	32.26	30.82	29.32	27.43	25.24	22.92	20.82	19.03	17.68
9.00	DISCHG	16.60	15.85	15.27	14.90	14.59	14.44	14.29	14.24	14.16	14.17
10.00	DISCHG	14.13	14.16	14.15	14.19	14.18	14.23	14.21	14.18	13.90	13.34
11.00	DISCHG	12.46	11.48	10.57	10.05	9.99	10.40	11.02	11.68	12.04	11.98
12.00	DISCHG	11.50	10.82	10.14	9.77	9.83	10.32	11.02	11.72	12.11	12.07
13.00	DISCHG	11.60	10.92	10.16	9.50	8.95	8.53	8.21	8.06	8.17	8.68
14.00	DISCHG	9.50	10.48	11.39	11.93	11.98	11.59	10.94	10.23	9.57	9.04
15.00	DISCHG	8.62	8.30	8.07	7.90	7.78	7.70	7.64	7.60	7.57	7.55
16.00	DISCHG	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.55	7.56	7.56
17.00	DISCHG	7.57	7.57	7.58	7.58	7.59	7.59	7.60	7.60	7.61	7.61
18.00	DISCHG	7.62	7.62	7.63	7.63	7.63	7.64	7.64	7.65	7.65	7.66
19.00	DISCHG	7.66	7.67	7.64	7.52	7.27	6.89	6.46	6.03	5.62	5.20
20.00	DISCHG	4.80	4.42	4.14	4.06	4.24	4.66	5.20	5.72	6.08	6.21
21.00	DISCHG	6.13	5.93	5.70	5.52	5.45	5.49	5.59	5.69	5.75	5.72
22.00	DISCHG	5.60	5.45	5.28	5.13	5.01	4.92	4.85	4.80	4.77	4.74
23.00	DISCHG	4.72	4.71	4.72	4.77	4.88	5.05	5.25	5.37	5.31	4.94
24.00	DISCHG	4.31	3.55	2.79	2.14	1.60	1.18	.85	.61	.43	.30
25.00	DISCHG	.21	.14	.09	.06	.04	.02	.01	.01	.01	

OPERATION RESVOR STRUCTURE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	243.42	5324.56
10.57	14.23	5320.38
11.84	12.07	5320.32
12.84	12.15	5320.32
14.36	12.01	5320.32
19.05	7.67	5320.20
21.82	5.75	5320.15
23.72	5.37	5320.14

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.07	1.31	7.84

1

TR20 XEQ 03-23-99 13:18	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 2
REV PC 09/83(.2)	EXISTING CONDITIONS : XSL_OUT.TXT		PAGE 41

6.00	DISCHG	28.83	72.35	130.67	194.18	233.53	243.13	225.59	196.75	164.03	136.21
7.00	DISCHG	110.16	90.96	74.71	62.71	54.31	47.93	43.63	40.31	37.91	35.72
8.00	DISCHG	33.91	32.28	30.89	29.35	27.51	25.30	23.01	20.86	19.10	17.70

9.00	DISCHG	16.64	15.86	15.30	14.90	14.62	14.43	14.31	14.23	14.18	14.15
10.00	DISCHG	14.15	14.15	14.16	14.17	14.20	14.21	14.23	14.17	13.93	13.35
11.00	DISCHG	12.50	11.50	10.61	10.05	9.99	10.37	11.01	11.65	12.04	11.98
12.00	DISCHG	11.53	10.83	10.16	9.77	9.83	10.30	11.00	11.69	12.11	12.07
13.00	DISCHG	11.63	10.94	10.19	9.52	8.97	8.53	8.22	8.06	8.17	8.65
14.00	DISCHG	9.47	10.45	11.36	11.92	11.98	11.61	10.96	10.25	9.60	9.05
15.00	DISCHG	8.63	8.31	8.08	7.90	7.78	7.70	7.64	7.60	7.57	7.55
16.00	DISCHG	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.55	7.56	7.56
17.00	DISCHG	7.57	7.57	7.58	7.58	7.59	7.59	7.60	7.60	7.61	7.61
18.00	DISCHG	7.62	7.62	7.63	7.63	7.63	7.64	7.64	7.65	7.65	7.66
19.00	DISCHG	7.66	7.67	7.64	7.53	7.28	6.91	6.48	6.04	5.63	5.22
20.00	DISCHG	4.81	4.43	4.15	4.06	4.23	4.64	5.18	5.71	6.07	6.21
21.00	DISCHG	6.14	5.94	5.70	5.53	5.45	5.49	5.58	5.69	5.75	5.72
22.00	DISCHG	5.61	5.45	5.29	5.14	5.02	4.92	4.85	4.80	4.77	4.74
23.00	DISCHG	4.72	4.71	4.72	4.76	4.88	5.05	5.24	5.37	5.31	4.96
24.00	DISCHG	4.33	3.57	2.82	2.16	1.62	1.19	.86	.62	.43	.30
25.00	DISCHG	.21	.14	.10	.06	.04	.02	.01	.01	.01	

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	162.72	(RUNOFF)
7.47	13.30	(RUNOFF)
10.45	5.70	(RUNOFF)
11.54	5.48	(RUNOFF)
12.54	5.55	(RUNOFF)
14.04	5.62	(RUNOFF)
18.95	3.08	(RUNOFF)
23.48	2.38	(RUNOFF)

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	140.93	5348.41
10.55	5.71	5340.40
11.68	5.33	5340.37
12.68	5.41	5340.38
14.19	5.46	5340.38
19.05	3.08	5340.22
23.61	2.32	5340.16

OPERATION RESVOR STRUCTURE 46

1

TR20 XEQ 03-23-99 13:18
 REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 EXISTING CONDITIONS : XSl_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	141.65	5345.77
7.68	13.45	5340.58
10.52	5.70	5340.25
11.69	5.33	5340.23
12.69	5.41	5340.23

14.19	5.45	5340.24
19.05	3.08	5340.13
23.62	2.32	5340.10

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .22 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	1.19	10.68
6.00	DISCHG	38.44	84.52	128.73	141.14	116.46	84.03	57.79	42.62	30.74	24.46
7.00	DISCHG	18.88	16.85	14.49	14.23	13.25	13.61	13.10	13.43	12.69	12.46
8.00	DISCHG	11.62	11.53	10.86	10.15	8.64	7.63	6.63	6.27	5.84	5.79
9.00	DISCHG	5.60	5.65	5.55	5.62	5.55	5.63	5.58	5.64	5.60	5.65
10.00	DISCHG	5.62	5.67	5.65	5.68	5.67	5.70	5.68	5.60	5.16	4.53
11.00	DISCHG	3.91	3.50	3.33	3.62	4.19	4.77	5.17	5.33	5.05	4.48
12.00	DISCHG	3.90	3.50	3.35	3.64	4.24	4.82	5.24	5.40	5.12	4.52
13.00	DISCHG	3.94	3.53	3.28	3.13	3.05	3.00	2.98	3.08	3.51	4.20
14.00	DISCHG	4.84	5.28	5.45	5.18	4.59	4.01	3.59	3.33	3.18	3.09
15.00	DISCHG	3.04	3.02	3.01	3.00	3.00	3.00	3.00	3.00	3.01	3.01
16.00	DISCHG	3.01	3.01	3.01	3.02	3.02	3.02	3.02	3.02	3.03	3.03
17.00	DISCHG	3.03	3.03	3.03	3.04	3.04	3.04	3.04	3.04	3.05	3.05
18.00	DISCHG	3.05	3.05	3.05	3.06	3.06	3.06	3.06	3.06	3.07	3.07
19.00	DISCHG	3.07	3.07	3.03	2.85	2.56	2.30	2.11	1.98	1.82	1.64
20.00	DISCHG	1.48	1.38	1.39	1.63	2.04	2.42	2.70	2.82	2.74	2.51
21.00	DISCHG	2.28	2.11	2.03	2.06	2.17	2.28	2.36	2.39	2.33	2.21
22.00	DISCHG	2.09	2.00	1.94	1.91	1.89	1.88	1.88	1.87	1.87	1.87
23.00	DISCHG	1.88	1.88	1.90	1.98	2.11	2.24	2.32	2.28	1.95	1.42
24.00	DISCHG	.92	.57	.35	.21	.12	.07	.04	.02	.01	.00

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	478.87	(RUNOFF)
10.40	18.47	(RUNOFF)
11.66	16.33	(RUNOFF)
12.65	16.41	(RUNOFF)
14.16	16.35	(RUNOFF)
18.88	9.68	(RUNOFF)
20.69	8.32	(RUNOFF)
21.64	7.36	(RUNOFF)
23.56	6.99	(RUNOFF)

OPERATION REACH CROSS SECTION 22

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	376.36	5464.27
10.55	18.46	5460.57
11.85	15.38	5460.51
12.86	15.39	5460.51
14.39	15.09	5460.50
19.03	9.67	5460.39
21.83	7.20	5460.29
23.73	6.66	5460.27

OPERATION RESVOR STRUCTURE 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	373.57	5258.14
10.56	18.46	5251.23
11.87	15.38	5251.03
12.88	15.39	5251.03
14.40	15.08	5251.01
19.05	9.67	5250.65
21.84	7.20	5250.48
23.75	6.66	5250.44

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .56 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.37	4.41	20.26
6.00	DISCHG	52.95	108.48	179.53	284.69	366.81	373.06	357.42	312.22	278.21	229.72
7.00	DISCHG	193.38	167.27	135.23	111.08	93.40	78.19	68.23	61.52	56.30	52.15
8.00	DISCHG	48.63	45.64	43.12	40.80	38.31	35.49	32.48	29.46	26.43	24.62
9.00	DISCHG	22.85	21.67	20.70	20.03	19.52	19.16	18.90	18.73	18.61	18.53
10.00	DISCHG	18.48	18.45	18.44	18.44	18.44	18.45	18.46	18.40	18.15	17.56
11.00	DISCHG	16.63	15.48	14.35	13.51	13.19	13.41	14.01	14.72	15.26	15.36
12.00	DISCHG	14.97	14.27	13.47	12.89	12.77	13.14	13.84	14.65	15.25	15.38
13.00	DISCHG	15.02	14.32	13.45	12.61	11.89	11.29	10.82	10.52	10.52	10.94
14.00	DISCHG	11.77	12.87	13.98	14.79	15.08	14.84	14.21	13.40	12.61	11.91
15.00	DISCHG	11.33	10.87	10.52	10.25	10.06	9.91	9.81	9.73	9.68	9.64
16.00	DISCHG	9.62	9.60	9.59	9.58	9.58	9.58	9.58	9.59	9.59	9.59
17.00	DISCHG	9.60	9.60	9.60	9.61	9.61	9.62	9.62	9.62	9.63	9.63
18.00	DISCHG	9.64	9.64	9.64	9.65	9.65	9.65	9.66	9.66	9.67	9.67
19.00	DISCHG	9.67	9.67	9.65	9.54	9.30	8.90	8.41	7.89	7.37	6.86
20.00	DISCHG	6.35	5.87	5.47	5.27	5.35	5.72	6.28	6.90	7.39	7.65
21.00	DISCHG	7.67	7.50	7.26	7.04	6.92	6.91	6.99	7.11	7.19	7.18
22.00	DISCHG	7.09	6.92	6.73	6.54	6.39	6.26	6.16	6.08	6.02	5.98
23.00	DISCHG	5.95	5.93	5.92	5.96	6.07	6.25	6.46	6.64	6.63	6.32
24.00	DISCHG	5.70	4.87	3.98	3.15	2.43	1.85	1.38	1.02	.74	.54
25.00	DISCHG	.38	.27	.19	.13	.09	.06	.04	.02	.01	.01
26.00	DISCHG	.01									

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
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OPERATION REACH CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.72	332.29	5326.46
12.05	15.01	5320.76
13.07	14.97	5320.76
14.61	14.53	5320.75
19.17	9.67	5320.58
22.01	7.14	5320.43
23.90	6.51	5320.39

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	377.80	(RUNOFF)
10.40	11.63	(RUNOFF)
11.57	10.91	(RUNOFF)
12.57	10.98	(RUNOFF)
14.07	11.07	(RUNOFF)
18.88	6.09	(RUNOFF)
20.59	5.63	(RUNOFF)
21.56	4.74	(RUNOFF)
23.50	4.59	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	424.35	5327.47
6.63	401.11	5327.21
11.49	24.77	5321.08
12.57	24.16	5321.06
14.14	22.35	5321.00
18.92	15.75	5320.79
21.48	11.79	5320.66
23.53	10.60	5320.62

OPERATION RESVOR STRUCTURE 24

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.77	382.44	5338.62
11.51	24.76	5321.90
12.58	24.13	5321.86
14.17	22.31	5321.72
18.95	15.75	5321.21
21.50	11.79	5320.91
23.55	10.63	5320.82

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .91 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 1.25	14.76 55.54 124.78	
6.00	DISCHG 183.44 235.73 294.78 332.24 348.32 358.76 370.49 380.05 382.03 374.45		
7.00	DISCHG 358.14 334.70 307.39 278.36 248.82 220.40 194.14 174.03 141.25 102.31		
8.00	DISCHG 89.78 82.27 74.40 67.49 61.66 56.86 52.96 49.49 46.21 43.04		
9.00	DISCHG 40.25 37.95 36.03 34.51 33.32 32.41 31.72 31.21 30.84 30.58		
10.00	DISCHG 30.39 30.27 30.18 30.14 30.11 30.09 29.92 29.20 27.89 26.46		
11.00	DISCHG 25.07 24.25 24.01 24.30 24.64 24.76 24.67 24.16 23.26 22.45		
12.00	DISCHG 21.93 21.72 22.06 22.83 23.56 23.99 24.13 23.81 23.04 22.33		
13.00	DISCHG 21.89 21.53 21.05 20.40 19.67 18.94 18.48 18.70 19.62 20.69		
14.00	DISCHG 21.58 22.21 22.28 21.89 21.48 21.29 21.14 20.79 20.25 19.60		
15.00	DISCHG 18.91 18.26 17.69 17.21 16.81 16.50 16.26 16.08 15.94 15.84		
16.00	DISCHG 15.76 15.71 15.67 15.65 15.63 15.62 15.62 15.62 15.62 15.62		
17.00	DISCHG 15.63 15.63 15.64 15.64 15.65 15.66 15.66 15.67 15.68 15.68		
18.00	DISCHG 15.69 15.70 15.70 15.71 15.71 15.72 15.73 15.73 15.74 15.74		

19.00	DISCHG	15.74	15.66	15.32	14.74	14.14	13.65	13.17	12.54	11.77	10.99
20.00	DISCHG	10.30	9.84	9.79	10.16	10.61	10.96	11.22	11.29	11.21	11.17
21.00	DISCHG	11.22	11.33	11.48	11.65	11.76	11.79	11.76	11.61	11.39	11.19
22.00	DISCHG	11.05	10.94	10.81	10.65	10.48	10.32	10.16	10.03	9.92	9.83
23.00	DISCHG	9.77	9.75	9.87	10.11	10.37	10.56	10.58	10.12	9.21	8.27
24.00	DISCHG	7.50	6.83	6.09	5.26	4.41	3.60	2.88	2.26	1.75	1.33
25.00	DISCHG	1.00	.74	.55	.40	.29	.20	.14	.10	.07	.04
26.00	DISCHG	.03	.02	.01	.01	.00					

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.91	379.21	5326.09
11.65	24.69	5320.90
12.72	23.98	5320.88
14.32	22.12	5320.83
19.06	15.75	5320.66
21.65	11.76	5320.55
23.67	10.54	5320.51

OPERATION RUNOFF CROSS SECTION 8

FR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 2
PAGE 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	442.29	(RUNOFF)
7.45	22.61	(RUNOFF)
10.45	9.40	(RUNOFF)
11.46	9.38	(RUNOFF)
12.46	9.42	(RUNOFF)
13.96	9.48	(RUNOFF)
18.87	4.77	(RUNOFF)
20.46	4.80	(RUNOFF)
23.45	3.85	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.04	547.49	5327.83
6.91	401.69	5326.32
11.47	33.83	5321.16
12.50	32.49	5321.12
14.03	29.60	5321.04
18.95	20.56	5320.79
20.53	15.19	5320.64
21.50	15.51	5320.65
23.48	14.01	5320.61

EXECUTIVE CONTROL OPERATION ENDCMP

COMPUTATIONS COMPLETED FOR PASS 2

RECORD ID

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 54

TO XSECTION 8

STARTING TIME = .00 RAIN DEPTH = 3.10 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 3 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 54

1

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSL_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	538.59	(RUNOFF)
7.46	37.94	(RUNOFF)
10.42	16.00	(RUNOFF)
11.52	15.53	(RUNOFF)
12.52	15.67	(RUNOFF)
14.02	15.86	(RUNOFF)
18.92	8.48	(RUNOFF)
20.53	8.15	(RUNOFF)
21.51	6.71	(RUNOFF)
23.47	6.60	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	255.85	(RUNOFF)
7.46	16.20	(RUNOFF)
10.41	6.77	(RUNOFF)
11.50	6.62	(RUNOFF)
12.50	6.67	(RUNOFF)
14.00	6.73	(RUNOFF)
18.88	3.55	(RUNOFF)
20.52	3.44	(RUNOFF)
23.46	2.78	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	793.38	5728.16
7.46	54.13	5721.41
10.42	22.77	5720.69
11.51	22.14	5720.67
12.51	22.34	5720.68

14.01	22.59	5720.68
18.91	12.04	5720.45
20.53	11.59	5720.44
21.51	9.53	5720.38
23.47	9.39	5720.38

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

OPERATION REACH CROSS SECTION 44

FR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 3
PAGE 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	747.13	5727.78
7.56	54.09	5721.41
10.54	22.76	5720.69
11.64	21.86	5720.67
12.64	22.05	5720.67
14.14	22.30	5720.68
19.02	12.03	5720.45
20.66	11.48	5720.43
21.64	9.47	5720.38
23.58	9.28	5720.37

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	57.60	(RUNOFF)
7.48	5.92	(RUNOFF)
10.45	2.59	(RUNOFF)
12.56	2.49	(RUNOFF)
14.07	2.55	(RUNOFF)
23.49	1.09	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	803.45	5728.25
7.55	60.01	5721.56
10.48	25.34	5720.75
11.63	24.27	5720.72
12.63	24.49	5720.73
14.13	24.78	5720.73
18.96	13.46	5720.48
20.65	12.74	5720.46
21.63	10.58	5720.41
23.57	10.36	5720.41

*** WARNING REACH 42 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	749.84	5668.10
10.60	25.33	5660.78
11.76	23.98	5660.75
12.76	24.21	5660.75
14.26	24.48	5660.76
19.07	13.45	5660.49
20.78	12.56	5660.46
21.76	10.52	5660.41
23.69	10.22	5660.41

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	129.43	(RUNOFF)
10.45	5.77	(RUNOFF)
11.58	5.40	(RUNOFF)
12.58	5.48	(RUNOFF)
14.08	5.55	(RUNOFF)
18.95	3.15	(RUNOFF)
23.51	2.39	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	849.41	5668.97
10.48	31.06	5660.93
11.73	28.77	5660.87
12.73	29.06	5660.88
14.23	29.38	5660.88
18.97	16.60	5660.56
20.75	15.20	5660.53
21.72	12.85	5660.47
23.64	12.31	5660.46

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	105.64	(RUNOFF)
10.46	6.07	(RUNOFF)
11.57	5.73	(RUNOFF)
12.57	5.85	(RUNOFF)
14.08	5.98	(RUNOFF)
18.94	3.42	(RUNOFF)
23.51	2.63	(RUNOFF)

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 3
PAGE 50

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	936.39	5669.74
10.47	37.13	5661.08
11.70	34.10	5661.00
12.70	34.47	5661.01
14.20	34.91	5661.02
18.96	20.03	5660.65
20.73	18.14	5660.60
21.69	15.45	5660.54
23.60	14.84	5660.52

OPERATION REACH CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	815.22	5589.26
10.59	37.07	5581.14
11.87	32.91	5581.03
12.87	33.28	5581.04
14.37	33.59	5581.05
19.07	20.01	5580.68
20.91	17.42	5580.60
21.86	15.22	5580.54
23.75	14.45	5580.52

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	193.89	(RUNOFF)
10.46	10.07	(RUNOFF)
11.60	9.26	(RUNOFF)
12.60	9.38	(RUNOFF)
14.11	9.50	(RUNOFF)
18.90	5.53	(RUNOFF)
20.64	4.97	(RUNOFF)
23.53	4.14	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

1

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
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6.45	930.87	5590.35
10.49	47.07	5581.42
11.81	40.70	5581.24
12.81	41.18	5581.26
14.32	41.55	5581.27
18.96	25.53	5580.83
20.87	21.69	5580.72
21.80	19.21	5580.65
23.66	18.11	5580.62

OPERATION REACH CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	808.69	5485.03
10.74	46.98	5480.66
12.09	39.34	5480.57
13.10	39.78	5480.57
14.62	39.80	5480.57
19.19	25.51	5480.39
21.17	20.77	5480.33
22.07	18.98	5480.31
23.92	17.63	5480.30

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	165.91	(RUNOFF)
10.46	9.89	(RUNOFF)
11.70	8.55	(RUNOFF)
12.71	8.57	(RUNOFF)
14.22	8.59	(RUNOFF)
18.92	5.37	(RUNOFF)
23.58	3.80	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.73	895.49	5485.51
10.56	56.73	5480.79
12.06	46.27	5480.65
13.05	46.74	5480.66
14.58	46.67	5480.66
19.00	30.85	5480.46
21.15	24.59	5480.38
22.00	22.70	5480.36
23.80	20.61	5480.33

*** WARNING - STRUCTURE 42 DELTA T IS TOO LARGE. 0 /2 > S /DELTA T OCCURED 2 TIMES STARTING WITH POINT262

OPERATION RESVOR STRUCTURE 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	854.04	5258.82
10.57	56.72	5251.26
12.08	46.25	5251.03
13.07	46.70	5251.04
14.60	46.63	5251.04
19.01	30.85	5250.69
21.18	24.59	5250.55
22.02	22.69	5250.50
23.83	20.59	5250.46

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 2.61 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .03 .93 5.75 20.48		
6.00	DISCHG 52.75 105.92 183.20 299.76 423.00 584.19 719.64 814.45 852.90 836.75		
7.00	DISCHG 764.28 628.36 490.16 377.74 302.97 234.93 201.76 175.54 158.97 147.66		
8.00	DISCHG 139.98 134.18 129.06 123.87 118.31 112.26 105.66 98.42 90.62 82.15		
9.00	DISCHG 75.37 69.52 65.14 61.95 59.77 58.34 57.43 56.88 56.58 56.43		
10.00	DISCHG 56.38 56.39 56.44 56.51 56.60 56.68 56.71 56.60 56.18 55.30		
11.00	DISCHG 53.84 51.81 49.25 46.41 43.85 42.08 41.39 41.86 43.21 44.78		
12.00	DISCHG 45.92 46.23 45.55 44.09 42.47 41.34 41.09 41.86 43.43 45.17		
13.00	DISCHG 46.40 46.66 45.74 43.73 41.11 38.41 36.08 34.39 33.48 33.46		
14.00	DISCHG 34.36 36.10 38.55 41.42 44.08 45.94 46.63 45.97 44.12 41.57		
15.00	DISCHG 38.89 36.48 34.55 33.10 32.07 31.38 30.92 30.63 30.46 30.36		
16.00	DISCHG 30.30 30.28 30.27 30.28 30.30 30.31 30.33 30.35 30.37 30.40		
17.00	DISCHG 30.42 30.44 30.46 30.48 30.51 30.53 30.55 30.57 30.59 30.61		
18.00	DISCHG 30.63 30.66 30.68 30.70 30.72 30.74 30.76 30.78 30.81 30.83		
19.00	DISCHG 30.85 30.84 30.76 30.55 30.16 29.50 28.56 27.29 25.70 23.94		
20.00	DISCHG 22.17 20.54 19.12 18.03 17.38 17.33 17.89 19.06 20.65 22.30		
21.00	DISCHG 23.63 24.42 24.58 24.21 23.56 22.92 22.49 22.33 22.40 22.57		
22.00	DISCHG 22.69 22.65 22.38 21.91 21.33 20.74 20.22 19.81 19.51 19.29		
23.00	DISCHG 19.15 19.07 19.06 19.13 19.30 19.58 19.95 20.33 20.58 20.50		
24.00	DISCHG 19.88 18.61 16.64 14.06 11.24 8.55 6.23 4.40 3.01 2.01		

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 3
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT PAGE 53

25.00	DISCHG	1.32	.84	.52	.32	.19	.11	.06	.03	.01	.01
26.00	DISCHG	.00									

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	181.85	(RUNOFF)
10.44	9.16	(RUNOFF)
11.64	8.18	(RUNOFF)
12.65	8.27	(RUNOFF)
14.15	8.29	(RUNOFF)
18.90	4.96	(RUNOFF)
23.56	3.63	(RUNOFF)

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.62	135.48	5604.49
10.67	9.14	5600.55
11.95	7.65	5600.46
12.96	7.67	5600.46
14.50	7.54	5600.45
19.16	4.96	5600.30
23.83	3.43	5600.21

OPERATION RESVOR STRUCTURE 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.67	133.79	5605.63
10.67	9.14	5600.70
11.97	7.65	5600.59
12.98	7.67	5600.59
14.51	7.54	5600.58
19.16	4.96	5600.38
23.85	3.43	5600.26

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.41 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.32
6.00	DISCHG	2.79	11.71	30.70	58.11	90.30
7.00	DISCHG	95.75	81.46	65.52	55.96	47.33
8.00	DISCHG	24.90	23.32	22.04	20.89	19.82
9.00	DISCHG	12.22	11.42	10.80	10.32	9.96
10.00	DISCHG	9.16	9.13	9.12	9.11	9.12
11.00	DISCHG	8.72	8.28	7.73	7.18	6.79
12.00	DISCHG	7.64	7.46	7.12	6.75	6.48
13.00	DISCHG	7.67	7.50	7.18	6.77	6.37

1

TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS
PAGE 54

14.00	DISCHG	5.53	5.93	6.46	6.99	7.39	7.54	7.44	7.15	6.78	6.40
15.00	DISCHG	6.06	5.78	5.55	5.37	5.24	5.13	5.06	5.00	4.96	4.93
16.00	DISCHG	4.90	4.89	4.88	4.88	4.87	4.87	4.87	4.87	4.88	4.88
17.00	DISCHG	4.88	4.89	4.89	4.89	4.89	4.90	4.90	4.90	4.91	4.91
18.00	DISCHG	4.91	4.92	4.92	4.93	4.93	4.93	4.94	4.94	4.94	4.95
19.00	DISCHG	4.95	4.95	4.95	4.94	4.89	4.77	4.57	4.33	4.08	3.82
20.00	DISCHG	3.56	3.30	3.06	2.85	2.75	2.78	2.96	3.23	3.53	3.77
21.00	DISCHG	3.90	3.91	3.84	3.72	3.62	3.57	3.57	3.60	3.66	3.70
22.00	DISCHG	3.69	3.65	3.57	3.47	3.38	3.31	3.24	3.19	3.15	3.12
23.00	DISCHG	3.09	3.08	3.07	3.06	3.08	3.13	3.22	3.33	3.42	3.41
24.00	DISCHG	3.26	2.95	2.54	2.10	1.68	1.32	1.02	.78	.58	.44
25.00	DISCHG	.32	.23	.17	.12	.09	.06	.04	.03	.02	.01
26.00	DISCHG	.01	.00								

OPERATION REACH CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.91	118.73	5463.89
10.78	9.13	5460.46

13.17	7.46	5460.37
14.73	7.25	5460.36
19.30	4.95	5460.25
24.01	3.35	5460.17

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	315.75	(RUNOFF)
7.46	20.69	(RUNOFF)
10.41	8.63	(RUNOFF)
11.52	8.34	(RUNOFF)
12.52	8.42	(RUNOFF)
14.02	8.47	(RUNOFF)
18.90	4.52	(RUNOFF)
20.54	4.33	(RUNOFF)
23.47	3.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	316.81	5465.87
6.85	143.19	5464.13
11.43	15.82	5460.69
12.48	15.25	5460.67
14.01	13.99	5460.63
14.68	11.78	5460.56
18.95	9.48	5460.47
20.48	7.31	5460.37
21.47	7.28	5460.36
23.47	6.58	5460.33

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	997.02	5486.08
10.47	74.47	5481.04
12.20	59.00	5480.83
13.07	58.71	5480.82
14.61	58.37	5480.82
18.96	40.32	5480.58
21.23	31.45	5480.47
22.00	29.16	5480.44
23.57	26.32	5480.40

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
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7.00	953.27	5327.94
10.57	74.41	5321.44
12.36	58.64	5321.09
13.22	58.17	5321.08
14.78	57.50	5321.06
19.08	40.29	5320.75
21.42	31.05	5320.62
23.71	26.10	5320.54

OPERATION RUNOFF CROSS SECTION 6

1

TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XSI_OUT.TXT

JOB 1 PASS
PAGE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	274.83	(RUNOFF)
10.45	10.94	(RUNOFF)
11.58	10.14	(RUNOFF)
12.58	10.26	(RUNOFF)
14.09	10.35	(RUNOFF)
18.90	5.86	(RUNOFF)
20.61	5.34	(RUNOFF)
23.51	4.39	(RUNOFF)

OPERATION ADDEHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	621.43	5325.42
6.99	987.44	5328.20
10.46	85.30	5321.68
12.48	68.06	5321.30
13.19	64.21	5321.21
14.76	63.50	5321.20
18.97	46.12	5320.84
21.46	35.46	5320.68
23.59	30.20	5320.60

OPERATION RESVOR STRUCTURE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	623.49	5352.40
6.99	986.33	5353.33
10.47	85.31	5350.36
12.48	68.06	5350.29
13.19	64.20	5350.27
14.76	63.50	5350.27
18.97	46.12	5350.20
21.46	35.46	5350.15
23.59	30.20	5350.13

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.77 SQ.MI.
5.00	DISCHG	.00	.00	.00	4.93	37.23 132.86

6.00	DISCHG	295.35	481.85	601.45	623.46	598.14	608.02	682.57	792.70	892.16	964.57
7.00	DISCHG	986.25	959.07	867.70	747.52	622.24	518.41	425.83	360.09	309.55	272.89
8.00	DISCHG	246.16	227.11	211.52	197.55	184.43	173.31	163.34	154.35	145.24	136.20
9.00	DISCHG	126.54	117.83	109.85	103.35	98.02	94.09	91.08	89.05	87.54	86.63
10.00	DISCHG	85.95	85.62	85.36	85.31	85.24	85.31	85.10	84.25	82.27	79.90
11.00	DISCHG	77.55	75.66	74.24	73.53	72.72	71.46	69.72	67.73	65.52	63.97
12.00	DISCHG	63.47	63.90	65.01	66.60	67.79	68.05	67.53	66.36	64.81	63.70
13.00	DISCHG	63.51	63.92	64.20	63.80	62.46	60.32	57.94	56.29	55.92	56.44

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14.00	DISCHG	57.28	58.15	58.77	59.04	59.57	60.73	62.20	63.28	63.43	62.48
15.00	DISCHG	60.57	58.12	55.52	53.13	51.08	49.46	48.21	47.31	46.66	46.22
16.00	DISCHG	45.91	45.72	45.59	45.51	45.47	45.46	45.45	45.47	45.48	45.50
17.00	DISCHG	45.53	45.55	45.58	45.61	45.64	45.67	45.70	45.73	45.76	45.79
18.00	DISCHG	45.82	45.85	45.88	45.91	45.94	45.97	46.00	46.03	46.06	46.09
19.00	DISCHG	46.11	46.04	45.66	44.82	43.77	42.77	41.77	40.52	38.86	36.86
20.00	DISCHG	34.73	32.74	31.33	30.67	30.46	30.34	30.25	30.18	30.22	30.62
21.00	DISCHG	31.50	32.66	33.85	34.83	35.38	35.43	35.10	34.53	33.86	33.32
22.00	DISCHG	33.01	32.89	32.78	32.58	32.21	31.69	31.09	30.49	29.96	29.51
23.00	DISCHG	29.16	28.94	28.94	29.19	29.59	29.98	30.20	29.83	28.73	27.34
24.00	DISCHG	26.12	24.99	23.63	21.77	19.34	16.50	13.52	10.68	8.19	6.11
25.00	DISCHG	4.46	3.20	2.26	1.58	1.08	.74	.50	.34	.22	.15
26.00	DISCHG	.10	.06	.04	.03	.01	.01	.00			

OPERATION RESVOR STRUCTURE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	624.52	5344.59
7.00	986.87	5346.23
10.45	85.29	5340.76
12.49	68.05	5340.60
13.19	64.21	5340.57
14.77	63.50	5340.56
18.98	46.12	5340.41
21.47	35.46	5340.31
23.59	30.20	5340.27

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.05	4.69	35.80	129.26
6.00	DISCHG	285.30	466.39	595.34	624.43	601.26	604.35	673.95	782.21	884.58	958.52
7.00	DISCHG	986.82	963.09	879.14	757.54	634.02	525.74	432.54	363.15	313.48	274.45
8.00	DISCHG	248.28	227.87	211.88	197.94	184.74	173.60	163.59	154.58	145.50	136.43
9.00	DISCHG	126.83	118.01	110.09	103.47	98.19	94.14	91.19	89.06	87.62	86.62
10.00	DISCHG	86.00	85.59	85.40	85.27	85.27	85.27	85.14	84.25	82.36	79.94
11.00	DISCHG	77.64	75.68	74.30	73.52	72.77	71.48	69.80	67.77	65.60	63.98
12.00	DISCHG	63.49	63.86	64.99	66.54	67.78	68.04	67.57	66.39	64.87	63.71
13.00	DISCHG	63.51	63.89	64.20	63.82	62.51	60.38	58.00	56.31	55.92	56.41
14.00	DISCHG	57.26	58.12	58.76	59.03	59.55	60.69	62.16	63.26	63.44	62.52
15.00	DISCHG	60.64	58.19	55.59	53.19	51.13	49.49	48.24	47.33	46.67	46.22
16.00	DISCHG	45.92	45.72	45.59	45.51	45.47	45.46	45.45	45.46	45.48	45.50
17.00	DISCHG	45.53	45.55	45.58	45.61	45.64	45.67	45.70	45.73	45.76	45.79
18.00	DISCHG	45.82	45.85	45.88	45.91	45.94	45.97	46.00	46.03	46.06	46.09
19.00	DISCHG	46.11	46.05	45.68	44.85	43.80	42.80	41.79	40.56	38.91	36.92

20.00	DISCHG	34.79	32.79	31.36	30.68	30.46	30.34	30.25	30.19	30.21	30.60
21.00	DISCHG	31.47	32.63	33.82	34.81	35.37	35.44	35.11	34.55	33.88	33.33
22.00	DISCHG	33.02	32.89	32.79	32.58	32.22	31.70	31.11	30.51	29.97	29.52
23.00	DISCHG	29.17	28.94	28.93	29.18	29.58	29.97	30.20	29.85	28.77	27.38
24.00	DISCHG	26.14	25.02	23.67	21.83	19.42	16.58	13.60	10.76	8.25	6.16

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25.00	DISCHG	4.50	3.23	2.28	1.59	1.10	.75	.51	.34	.23	.15
26.00	DISCHG	.10	.06	.04	.03	.02	.01	.00			

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	626.01	5322.75
7.01	986.53	5323.96
10.40	85.30	5320.43
12.49	68.05	5320.34
13.20	64.20	5320.32
14.77	63.50	5320.32
18.98	46.12	5320.23
21.47	35.46	5320.18
23.59	30.20	5320.15

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .05	4.55 35.02 127.25	
6.00	DISCHG 282.61 461.57 591.77 625.81 601.45 603.99 670.04	779.08 881.13 957.07	
7.00	DISCHG 986.38 964.92 882.62 761.85 637.72 529.05 435.28	363.79 314.35 274.79	
8.00	DISCHG 248.73 228.04 212.18 198.06 185.02 173.67 163.82	154.63 145.72 136.49	
9.00	DISCHG 127.06 118.06 110.28 103.48 98.33 94.13 91.29	89.03 87.69 86.58	
10.00	DISCHG 86.06 85.56 85.44 85.24 85.30 85.24 85.17	84.25 82.43 79.95	
11.00	DISCHG 77.69 75.68 74.33 73.51 72.80 71.49 69.84	67.79 65.65 63.99	
12.00	DISCHG 63.50 63.84 64.98 66.51 67.78 68.04 67.58	66.41 64.89 63.72	
13.00	DISCHG 63.51 63.89 64.20 63.83 62.54 60.42 58.04	56.33 55.92 56.41	
14.00	DISCHG 57.24 58.11 58.75 59.03 59.53 60.67 62.14	63.25 63.44 62.55	
15.00	DISCHG 60.67 58.23 55.63 53.22 51.16 49.52 48.26	47.34 46.68 46.23	
16.00	DISCHG 45.92 45.72 45.59 45.52 45.47 45.46 45.45	45.46 45.48 45.50	
17.00	DISCHG 45.53 45.55 45.58 45.61 45.64 45.67 45.70	45.73 45.76 45.79	
18.00	DISCHG 45.82 45.85 45.88 45.91 45.94 45.97 46.00	46.03 46.06 46.09	
19.00	DISCHG 46.11 46.05 45.69 44.87 43.82 42.81 41.81	40.58 38.94 36.95	
20.00	DISCHG 34.82 32.82 31.37 30.69 30.47 30.34 30.25	30.19 30.21 30.59	
21.00	DISCHG 31.45 32.61 33.80 34.80 35.37 35.44 35.12	34.56 33.89 33.33	
22.00	DISCHG 33.02 32.89 32.79 32.59 32.23 31.71 31.12	30.52 29.98 29.52	
23.00	DISCHG 29.17 28.94 28.93 29.18 29.57 29.96 30.19	29.86 28.79 27.40	
24.00	DISCHG 26.16 25.04 23.69 21.86 19.46 16.62 13.64	10.80 8.28 6.19	
25.00	DISCHG 4.52 3.25 2.29 1.60 1.10 .75 .51	.34 .23 .15	
26.00	DISCHG .10 .06 .04 .03 .02 .01 .00		

OPERATION RESVOR STRUCTURE 32

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	627.29	5313.30
7.01	986.83	5314.70
10.49	85.39	5310.45
12.49	68.11	5310.36
13.20	64.15	5310.34
14.77	63.48	5310.33
18.97	46.11	5310.24
21.47	35.46	5310.19
23.59	30.19	5310.16

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.05	.00	4.44	34.36	125.58
6.00	DISCHG	280.34	455.52	587.71	626.88	602.27	603.12	666.11	774.79	878.07	954.68
7.00	DISCHG	986.50	966.24	886.95	766.12	642.84	532.37	439.08	364.88	314.53	275.59
8.00	DISCHG	248.62	228.67	211.98	198.60	184.83	174.13	163.63	155.04	145.55	136.88
9.00	DISCHG	126.92	118.41	110.14	103.79	98.16	94.39	91.11	89.25	87.51	86.78
10.00	DISCHG	85.88	85.73	85.27	85.40	85.15	85.39	85.03	84.40	82.32	80.11
11.00	DISCHG	77.60	75.83	74.23	73.63	72.71	71.61	69.76	67.91	65.59	64.09
12.00	DISCHG	63.42	63.91	64.88	66.56	67.69	68.11	67.53	66.50	64.85	63.79
13.00	DISCHG	63.45	63.93	64.15	63.89	62.51	60.50	58.03	56.39	55.87	56.43
14.00	DISCHG	57.20	58.14	58.71	59.06	59.49	60.68	62.09	63.26	63.42	62.59
15.00	DISCHG	60.68	58.28	55.64	53.27	51.16	49.55	48.26	47.36	46.68	46.25
16.00	DISCHG	45.91	45.74	45.58	45.53	45.46	45.47	45.45	45.47	45.47	45.51
17.00	DISCHG	45.52	45.56	45.57	45.61	45.63	45.67	45.69	45.73	45.75	45.79
18.00	DISCHG	45.81	45.85	45.87	45.91	45.93	45.97	46.00	46.03	46.06	46.09
19.00	DISCHG	46.11	46.05	45.69	44.88	43.83	42.83	41.82	40.60	38.96	36.98
20.00	DISCHG	34.85	32.84	31.38	30.69	30.47	30.35	30.25	30.19	30.21	30.59
21.00	DISCHG	31.43	32.60	33.78	34.79	35.36	35.44	35.13	34.57	33.90	33.34
22.00	DISCHG	33.03	32.89	32.79	32.59	32.23	31.72	31.13	30.53	29.99	29.53
23.00	DISCHG	29.17	28.95	28.93	29.17	29.57	29.96	30.19	29.87	28.80	27.42
24.00	DISCHG	26.17	25.05	23.71	21.89	19.49	16.66	13.68	10.83	8.31	6.22
25.00	DISCHG	4.54	3.26	2.31	1.61	1.11	.75	.51	.34	.23	.15
26.00	DISCHG	.10	.06	.04	.03	.02	.01	.00			

OPERATION RESVOR STRUCTURE 31

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	628.98	5302.52
7.01	986.60	5303.95
10.50	85.55	5300.34
12.49	68.15	5300.27
13.20	64.14	5300.26
14.77	63.49	5300.25
18.98	46.12	5300.18
21.47	35.46	5300.14
23.59	30.19	5300.12

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .05	4.36 33.87 124.32	
6.00	DISCHG 278.61 453.86 583.62 628.36 602.30 603.04 662.72	771.84 875.02 953.19	
7.00	DISCHG 986.09 967.72 889.98 770.06 646.11 535.53 439.17	366.21 314.21 276.64	
8.00	DISCHG 248.12 229.52 211.47 199.34 184.38 174.77 163.21	155.61 145.19 137.40	
9.00	DISCHG 126.61 118.87 109.86 104.18 97.90 94.72 90.86	89.53 87.27 87.02	
10.00	DISCHG 85.67 85.94 85.08 85.58 84.98 85.55 84.89	84.56 82.21 80.26	
11.00	DISCHG 77.50 75.95 74.14 73.72 72.64 71.70 69.71	68.00 65.55 64.15	
12.00	DISCHG 63.36 63.95 64.82 66.59 67.65 68.15 67.50	66.54 64.84 63.81	
13.00	DISCHG 63.43 63.94 64.14 63.91 62.52 60.53 58.04	56.40 55.87 56.43	
14.00	DISCHG 57.19 58.13 58.71 59.06 59.49 60.66 62.08	63.25 63.43 62.59	
15.00	DISCHG 60.71 58.30 55.68 53.28 51.19 49.55 48.28	47.36 46.69 46.24	
16.00	DISCHG 45.93 45.72 45.60 45.51 45.48 45.45 45.46	45.46 45.48 45.50	
17.00	DISCHG 45.53 45.55 45.58 45.60 45.64 45.66 45.70	45.72 45.76 45.78	
18.00	DISCHG 45.82 45.84 45.88 45.90 45.94 45.96 46.00	46.02 46.06 46.08	
19.00	DISCHG 46.12 46.05 45.70 44.89 43.84 42.83 41.84	40.61 38.98 36.99	
20.00	DISCHG 34.88 32.86 31.40 30.69 30.47 30.34 30.26	30.19 30.21 30.58	
21.00	DISCHG 31.43 32.58 33.78 34.77 35.36 35.44 35.13	34.57 33.91 33.34	
22.00	DISCHG 33.03 32.89 32.80 32.59 32.24 31.72 31.13	30.53 29.99 29.53	
23.00	DISCHG 29.18 28.94 28.93 29.17 29.56 29.95 30.19	29.87 28.82 27.43	
24.00	DISCHG 26.19 25.06 23.73 21.91 19.52 16.69 13.71	10.86 8.34 6.23	
25.00	DISCHG 4.56 3.27 2.31 1.61 1.11 .76 .51	.34 .23 .15	
26.00	DISCHG .10 .06 .04 .03 .02 .01 .00		

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	229.71	(RUNOFF)
10.45	11.55	(RUNOFF)
11.64	10.41	(RUNOFF)
12.64	10.52	(RUNOFF)
14.14	10.59	(RUNOFF)
18.91	6.29	(RUNOFF)
20.67	5.49	(RUNOFF)
23.55	4.63	(RUNOFF)

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	174.61	5323.90
10.57	11.53	5320.44
11.84	9.76	5320.39
12.84	9.83	5320.39
14.37	9.71	5320.39
19.06	6.28	5320.25
23.72	4.40	5320.18

OPERATION RESVOR STRUCTURE 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	174.98	5342.33
10.52	11.53	5340.17
11.84	9.75	5340.14
12.85	9.83	5340.15
14.37	9.71	5340.14
19.06	6.28	5340.09
23.72	4.40	5340.06

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.54 SQ.MI.
5.00	DISCHG	.00	.00	.00	.02	.57
6.00	DISCHG	17.41	46.94	90.91	136.88	166.03
7.00	DISCHG	85.95	71.76	59.72	51.06	43.99
8.00	DISCHG	27.47	26.35	24.99	23.93	22.27
9.00	DISCHG	13.59	13.02	12.45	12.18	11.86
10.00	DISCHG	11.44	11.48	11.45	11.50	11.48
11.00	DISCHG	10.16	9.40	8.68	8.26	8.18
12.00	DISCHG	9.34	8.82	8.29	8.01	8.04
13.00	DISCHG	9.43	8.91	8.33	7.81	7.36
14.00	DISCHG	7.70	8.47	9.18	9.63	9.69
15.00	DISCHG	7.10	6.84	6.64	6.49	6.39
16.00	DISCHG	6.17	6.16	6.16	6.16	6.16
17.00	DISCHG	6.19	6.19	6.20	6.20	6.20
18.00	DISCHG	6.23	6.24	6.24	6.25	6.25
19.00	DISCHG	6.28	6.28	6.26	6.17	5.97
20.00	DISCHG	3.99	3.68	3.45	3.37	3.50
21.00	DISCHG	5.01	4.86	4.68	4.55	4.49
22.00	DISCHG	4.60	4.48	4.35	4.23	4.14
23.00	DISCHG	3.88	3.87	3.88	3.92	4.01
24.00	DISCHG	3.58	2.98	2.38	1.85	1.41
25.00	DISCHG	.20	.14	.10	.06	.04

OPERATION RESVOR STRUCTURE 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	174.89	5342.53
10.59	11.56	5340.21
11.83	9.77	5340.17
12.84	9.83	5340.18
14.37	9.71	5340.17
19.06	6.28	5340.11
23.72	4.40	5340.08

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.54 SQ.MI.
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5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.02	.55	4.05
6.00	DISCHG	16.98	46.12	89.85	135.55	165.54	174.89	165.12	146.10	124.40	104.25
7.00	DISCHG	86.47	71.88	60.11	51.06	44.28	39.26	35.68	32.96	30.95	29.10
8.00	DISCHG	27.65	26.23	25.16	23.82	22.43	20.58	18.87	17.05	15.73	14.48
9.00	DISCHG	13.70	12.94	12.55	12.10	11.95	11.69	11.66	11.50	11.54	11.43

10.00	DISCHG	11.50	11.42	11.50	11.45	11.53	11.48	11.56	11.46	11.32	10.83
11.00	DISCHG	10.21	9.39	8.73	8.24	8.21	8.44	8.95	9.41	9.75	9.68
12.00	DISCHG	9.37	8.82	8.32	7.99	8.05	8.38	8.93	9.45	9.80	9.77
13.00	DISCHG	9.45	8.91	8.35	7.81	7.38	7.02	6.76	6.61	6.69	7.05
14.00	DISCHG	7.69	8.45	9.17	9.62	9.70	9.42	8.95	8.39	7.89	7.45
15.00	DISCHG	7.11	6.84	6.65	6.49	6.39	6.31	6.26	6.22	6.20	6.18
16.00	DISCHG	6.17	6.16	6.16	6.16	6.16	6.17	6.17	6.17	6.18	6.18
17.00	DISCHG	6.19	6.19	6.20	6.20	6.21	6.21	6.21	6.22	6.22	6.23
18.00	DISCHG	6.23	6.24	6.24	6.25	6.25	6.25	6.26	6.26	6.27	6.27
19.00	DISCHG	6.28	6.28	6.26	6.17	5.98	5.68	5.35	5.00	4.66	4.33
20.00	DISCHG	4.00	3.69	3.46	3.37	3.50	3.81	4.22	4.64	4.93	5.05
21.00	DISCHG	5.01	4.86	4.68	4.55	4.49	4.51	4.59	4.67	4.71	4.69
22.00	DISCHG	4.61	4.48	4.35	4.24	4.14	4.06	4.00	3.96	3.92	3.90
23.00	DISCHG	3.88	3.87	3.88	3.91	4.00	4.14	4.29	4.39	4.35	4.08
24.00	DISCHG	3.59	2.99	2.39	1.86	1.41	1.06	.78	.57	.41	.29
25.00	DISCHG	.20	.14	.10	.07	.04	.03	.02	.01	.01	.00

OPERATION RESVOR STRUCTURE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.51	174.47	5323.73
10.53	11.53	5320.31
11.85	9.75	5320.26
12.85	9.83	5320.26
14.37	9.71	5320.26
19.06	6.28	5320.17
23.73	4.40	5320.12

TIME(HRS)	FIRST HYDROGRAPHE POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.52	3.86
6.00	DISCHG	16.35	44.90	87.54	132.21	164.76	174.44	166.56	147.11	126.05	105.23
7.00	DISCHG	87.70	72.41	60.35	51.40	44.40	39.47	35.72	33.09	30.96	29.20
8.00	DISCHG	27.64	26.32	25.14	23.91	22.44	20.69	18.87	17.15	15.72	14.57
9.00	DISCHG	13.67	13.01	12.51	12.17	11.91	11.74	11.61	11.55	11.49	11.48
10.00	DISCHG	11.45	11.47	11.46	11.49	11.49	11.52	11.52	11.50	11.29	10.88
11.00	DISCHG	10.20	9.45	8.71	8.28	8.17	8.46	8.91	9.42	9.72	9.71
12.00	DISCHG	9.36	8.86	8.32	8.02	8.02	8.38	8.90	9.45	9.78	9.79
13.00	DISCHG	9.45	8.95	8.36	7.84	7.38	7.04	6.76	6.62	6.68	7.04
14.00	DISCHG	7.66	8.43	9.15	9.62	9.70	9.44	8.96	8.42	7.90	7.47
15.00	DISCHG	7.12	6.85	6.65	6.50	6.39	6.32	6.26	6.22	6.19	6.18
16.00	DISCHG	6.17	6.16	6.16	6.16	6.16	6.17	6.17	6.17	6.18	6.18
17.00	DISCHG	6.19	6.19	6.20	6.20	6.20	6.21	6.21	6.22	6.22	6.23
18.00	DISCHG	6.23	6.24	6.24	6.25	6.25	6.26	6.26	6.26	6.27	6.27

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19.00	DISCHG	6.28	6.28	6.26	6.18	5.98	5.70	5.36	5.01	4.67	4.34
20.00	DISCHG	4.01	3.70	3.46	3.37	3.49	3.80	4.21	4.62	4.92	5.05
21.00	DISCHG	5.01	4.87	4.69	4.55	4.49	4.51	4.58	4.67	4.71	4.69
22.00	DISCHG	4.61	4.49	4.36	4.24	4.14	4.06	4.00	3.96	3.92	3.90
23.00	DISCHG	3.88	3.87	3.88	3.91	4.00	4.13	4.28	4.39	4.36	4.09
24.00	DISCHG	3.61	3.01	2.41	1.87	1.43	1.07	.79	.57	.41	.29
25.00	DISCHG	.21	.14	.10	.07	.04	.03	.02	.01	.01	.00

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18.00	DISCHG	2.49	2.49	2.49	2.49	2.50	2.50	2.50	2.50	2.50	2.51
19.00	DISCHG	2.51	2.51	2.48	2.33	2.09	1.88	1.73	1.62	1.49	1.34
20.00	DISCHG	1.21	1.13	1.14	1.33	1.66	1.98	2.20	2.30	2.24	2.05
21.00	DISCHG	1.86	1.73	1.66	1.68	1.77	1.86	1.93	1.95	1.91	1.81
22.00	DISCHG	1.71	1.64	1.59	1.56	1.55	1.54	1.54	1.53	1.53	1.53
23.00	DISCHG	1.54	1.54	1.56	1.62	1.73	1.83	1.90	1.86	1.60	1.17
24.00	DISCHG	.76	.47	.29	.17	.10	.06	.03	.01	.01	.00

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	376.94	(RUNOFF)
10.41	15.47	(RUNOFF)
11.66	13.69	(RUNOFF)
12.65	13.78	(RUNOFF)
14.16	13.74	(RUNOFF)
18.88	8.16	(RUNOFF)
20.69	7.02	(RUNOFF)
21.64	6.21	(RUNOFF)
23.56	5.91	(RUNOFF)

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	290.05	5463.68
10.55	15.45	5460.51
11.86	12.86	5460.46
12.86	12.87	5460.46
14.39	12.61	5460.45
19.03	8.16	5460.33
21.83	6.07	5460.24
23.73	5.61	5460.22

OPERATION RESVOR STRUCTURE 28

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TR20 YEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.53	288.53	5257.78
10.56	15.45	5251.03
11.87	12.86	5250.86
12.88	12.87	5250.86
14.41	12.60	5250.84
19.05	8.16	5250.54
21.85	6.07	5250.40
23.75	5.62	5250.37

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = .56 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.15	2.48	12.66
6.00	DISCHG	37.21	78.49	133.12	194.18	268.58	287.70	281.54	254.81	220.56	190.79
7.00	DISCHG	166.00	135.46	111.50	93.05	76.47	65.58	57.90	52.07	47.64	44.08

8.00	DISCHG	41.07	38.52	36.36	34.38	32.28	29.92	26.87	24.74	22.48	20.80
9.00	DISCHG	19.37	18.31	17.49	16.88	16.43	16.11	15.87	15.71	15.60	15.52
10.00	DISCHG	15.47	15.45	15.43	15.43	15.43	15.44	15.45	15.40	15.20	14.74
11.00	DISCHG	13.98	13.05	12.13	11.42	11.14	11.29	11.75	12.32	12.76	12.85
12.00	DISCHG	12.55	11.99	11.35	10.87	10.75	11.04	11.60	12.25	12.74	12.86
13.00	DISCHG	12.59	12.04	11.34	10.66	10.05	9.55	9.16	8.90	8.87	9.20
14.00	DISCHG	9.86	10.75	11.66	12.34	12.60	12.43	11.94	11.30	10.65	10.08
15.00	DISCHG	9.59	9.21	8.90	8.67	8.50	8.37	8.28	8.21	8.16	8.12
16.00	DISCHG	8.10	8.08	8.07	8.07	8.07	8.07	8.07	8.07	8.07	8.08
17.00	DISCHG	8.08	8.08	8.09	8.09	8.10	8.10	8.10	8.11	8.11	8.11
18.00	DISCHG	8.12	8.12	8.13	8.13	8.13	8.14	8.14	8.14	8.15	8.15
19.00	DISCHG	8.16	8.16	8.14	8.05	7.85	7.53	7.13	6.70	6.27	5.84
20.00	DISCHG	5.42	5.01	4.67	4.49	4.54	4.83	5.28	5.78	6.19	6.41
21.00	DISCHG	6.44	6.32	6.13	5.95	5.85	5.84	5.91	6.00	6.06	6.06
22.00	DISCHG	5.98	5.85	5.69	5.54	5.41	5.30	5.21	5.15	5.10	5.06
23.00	DISCHG	5.03	5.01	5.01	5.04	5.12	5.27	5.45	5.59	5.59	5.35
24.00	DISCHG	4.84	4.17	3.43	2.74	2.14	1.64	1.24	.93	.68	.50
25.00	DISCHG	.36	.26	.18	.13	.09	.06	.04	.03	.02	.01
26.00	DISCHG	.01	.00								

OPERATION REACH CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.76	252.89	5325.58
12.06	12.55	5320.68
13.08	12.50	5320.68
14.63	12.11	5320.67
19.17	8.15	5320.49
23.91	5.48	5320.33

OPERATION RUNOFF CROSS SECTION 10

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	299.62	(RUNOFF)
10.41	9.75	(RUNOFF)
11.57	9.16	(RUNOFF)
12.57	9.23	(RUNOFF)
14.07	9.31	(RUNOFF)
18.88	5.14	(RUNOFF)
20.59	4.76	(RUNOFF)
23.50	3.88	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	332.07	5326.45
6.68	304.18	5326.15
11.48	20.93	5320.96
12.56	20.34	5320.94

14.13	18.78	5320.89
18.94	13.28	5320.71
21.49	9.96	5320.60
23.53	8.96	5320.54

OPERATION RESVOR STRUCTURE 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.81	291.51	5334.08
11.50	20.92	5321.61
12.57	20.32	5321.56
14.15	18.74	5321.44
18.95	13.29	5321.02
21.51	9.96	5320.77
23.55	8.98	5320.69

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .91 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.55	8.74	38.52	94.52
6.00	DISCHG	157.93	196.20	238.19	264.58	272.71	275.19	280.80	287.81	291.49	288.72
7.00	DISCHG	279.27	264.74	246.41	225.36	203.25	184.30	159.38	122.94	95.71	84.27
8.00	DISCHG	75.15	68.34	63.04	57.41	52.34	48.23	44.90	41.83	38.99	36.44
9.00	DISCHG	34.16	32.22	30.59	29.26	28.21	27.40	26.77	26.30	25.94	25.65
10.00	DISCHG	25.50	25.38	25.30	25.25	25.23	25.21	25.03	24.34	23.18	21.99
11.00	DISCHG	21.03	20.38	20.22	20.51	20.82	20.92	20.82	20.34	19.53	18.81
12.00	DISCHG	18.35	18.19	18.50	19.19	19.84	20.21	20.31	20.01	19.32	18.69
13.00	DISCHG	18.31	18.02	17.66	17.16	16.59	16.01	15.64	15.84	16.61	17.49
14.00	DISCHG	18.20	18.69	18.69	18.31	17.93	17.76	17.66	17.41	17.02	16.52
15.00	DISCHG	15.98	15.46	14.99	14.58	14.24	13.97	13.76	13.59	13.47	13.37
16.00	DISCHG	13.30	13.25	13.21	13.19	13.17	13.16	13.16	13.16	13.16	13.16

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TR20 XEQ 03-23-99 13:18 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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17.00	DISCHG	13.17	13.17	13.17	13.18	13.19	13.19	13.20	13.20	13.21	13.22
18.00	DISCHG	13.22	13.23	13.23	13.24	13.25	13.25	13.26	13.26	13.27	13.28
19.00	DISCHG	13.28	13.20	12.92	12.43	11.93	11.53	11.13	10.62	9.99	9.35
20.00	DISCHG	8.78	8.40	8.36	8.67	9.05	9.33	9.52	9.54	9.44	9.38
21.00	DISCHG	9.41	9.50	9.64	9.81	9.93	9.96	9.94	9.81	9.62	9.45
22.00	DISCHG	9.33	9.24	9.13	9.01	8.88	8.74	8.61	8.50	8.41	8.33
23.00	DISCHG	8.27	8.26	8.35	8.55	8.77	8.93	8.93	8.53	7.76	6.96
24.00	DISCHG	6.33	5.78	5.20	4.53	3.84	3.18	2.58	2.05	1.61	1.24
25.00	DISCHG	.94	.71	.53	.39	.29	.21	.15	.10	.07	.05
26.00	DISCHG	.03	.02	.01	.01	.00					

OPERATION REACH CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.95	289.22	5325.19
11.64	20.85	5320.80
12.72	20.17	5320.78
14.31	18.55	5320.74
19.06	13.28	5320.59
21.66	9.93	5320.50
23.67	8.90	5320.44

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.00	364.65	(RUNOFF)
7.45	19.19	(RUNOFF)
10.45	8.01	(RUNOFF)
11.46	8.00	(RUNOFF)
12.46	8.04	(RUNOFF)
13.96	8.10	(RUNOFF)
18.87	4.08	(RUNOFF)
20.46	4.12	(RUNOFF)
23.45	3.30	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 8

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.05	445.55	5326.76
6.95	308.21	5325.38
11.47	28.63	5321.01
12.50	27.42	5320.98
14.02	25.06	5320.91
18.95	17.40	5320.70
20.52	12.96	5320.58
21.50	13.12	5320.59
23.47	11.89	5320.55

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL OPERATION ENDJOB

RECORD ID

1

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 SUMMARY
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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 HYDROGRAPHE
A QUESTION MARK(?) INDICATES A HYDROGRAPH WITH PEAK AS LAST POINT.)

SECTION/ STRUCTURE	STANDARD CONTROL	RAIN DRAINAGE	ANTEC TABLE	MAIN MOIST	PRECIPITATION TIME	RUNOFF	PEAK DISCHARGE
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ID	OPERATION	AREA (SQ MI)	#	COND	INCREM (HR)	BEGIN (HR)	AMOUNT (IN)	DURATION (HR)	AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 1													
XSECTION 54	RUNOFF	.61	7	2	.10	.0	3.80	24.00	1.68	---	6.09	797.88	1312.1
XSECTION 56	RUNOFF	.24	7	2	.10	.0	3.80	24.00	1.88	---	6.07	366.84	1547.9
XSECTION 44	ADDHYD	.84	7	2	.10	.0	3.80	24.00	1.73	5731.27	6.08	1163.44	1376.8
XSECTION 44	REACH	.84	7	2	.10	.0	3.80	24.00	1.73	5730.88	6.20	1116.25	1321.0
XSECTION 44	RUNOFF	.13	7	2	.10	.0	3.80	24.00	1.14	---	6.15	96.82	728.0
XSECTION 44	ADDHYD	.98	7	2	.10	.0	3.80	24.00	1.65	5731.67	6.20	1210.82	1238.1
XSECTION 42	REACH	.98	7	2	.10	.0	3.80	24.00	1.65	5671.95	6.30	1187.86	1214.6
XSECTION 42	RUNOFF	.28	7	2	.10	.0	3.80	24.00	1.23	---	6.18	212.52	761.7
XSECTION 42	ADDHYD	1.26	7	2	.10	.0	3.80	24.00	1.56	5673.47	6.29	1360.41	1082.1
XSECTION 46	RUNOFF	.38	7	2	.10	.0	3.80	24.00	.89	---	6.19	196.23	513.1
XSECTION 42	ADDHYD	1.64	7	2	.10	.0	3.80	24.00	1.40	5674.94	6.28	1527.68	932.1
XSECTION 40	REACH	1.64	7	2	.10	.0	3.80	24.00	1.40	5594.46	6.43	1367.53	834.4
XSECTION 40	RUNOFF	.52	7	2	.10	.0	3.80	24.00	1.14	---	6.21	329.36	635.8
XSECTION 40	ADDHYD	2.16	7	2	.10	.0	3.80	24.00	1.34	5596.52	6.41	1587.30	735.9
XSECTION 18	REACH	2.16	7	2	.10	.0	3.80	24.00	1.34	5488.39	6.58	1409.62	653.1
XSECTION 18	RUNOFF	.45	7	2	.10	.0	3.80	24.00	1.32	---	6.33	269.80	595.6
XSECTION 18	ADDHYD	2.61	7	2	.10	.0	3.80	24.00	1.34	5489.50	6.56	1607.73	616.0
STRUCTURE 42	RESVOR	2.61	7	2	.10	.0	3.80	24.00	1.34	5265.86	6.76	1285.69	492.6
XSECTION 21	RUNOFF	.41	7	2	.10	.0	3.80	24.00	1.36	---	6.24	294.60	718.5
XSECTION 21	REACH	.41	7	2	.10	.0	3.80	24.00	1.36	5605.50	6.49	227.28	554.3
STRUCTURE 39	RESVOR	.41	7	2	.10	.0	3.80	24.00	1.36	5608.98	6.62	209.52	511.0
XSECTION 20	REACH	.41	7	2	.10	.0	3.80	24.00	1.36	5464.66	6.84	195.73	477.4
XSECTION 20	RUNOFF	.30	7	2	.10	.0	3.80	24.00	1.91	---	6.08	452.67	1514.0
XSECTION 20	ADDHYD	.71	7	2	.10	.0	3.80	24.00	1.59	5467.36	6.10	465.66	656.8
XSECTION 18	ADDHYD	3.32	7	2	.10	.0	3.80	24.00	1.39	5489.01	6.75	1519.62	457.9
XSECTION 6	REACH	3.32	7	2	.10	.0	3.80	24.00	1.39	5332.03	6.94	1491.24	449.3
XSECTION 6	RUNOFF	.45	7	2	.10	.0	3.80	24.00	1.49	---	6.17	425.91	938.1
XSECTION 6	ADDHYD	3.77	7	2	.10	.0	3.80	24.00	1.40	5332.45	6.92	1545.63	409.7
STRUCTURE 35	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.40	5354.55	6.92	1545.70	409.7
STRUCTURE 34	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.40	5348.32	6.93	1545.81	409.7
STRUCTURE 33	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.40	5325.28	6.94	1544.80	409.4
STRUCTURE 32	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.40	5316.33	6.94	1544.87	409.5

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REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 SUMMARY
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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	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM	PRECIPITATION				PEAK DISCHARGE			
						BEGIN	AMOUNT	DURATION	RUNOFF AMOUNT	ELEVATION	TIME	RATE	RATE

(SQ MI) (HR) (HR) (IN) (HR) (IN) (FT) (HR) (CFS) (CSM)

ALTERNATE 1 STORM 1

STRUCTURE 31	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.40	5305.28	6.95	1544.74	409.4
XSECTION 4	RUNOFF	.54	7	2	.10	.0	3.80	24.00	1.30	---	6.23	374.84	698.0
XSECTION 4	REACH	.54	7	2	.10	.0	3.80	24.00	1.30	5325.39	6.46	298.95	556.7
STRUCTURE 45	RESVOR	.54	7	2	.10	.0	3.80	24.00	1.30	5343.37	6.46	298.95	556.7
STRUCTURE 44	RESVOR	.54	7	2	.10	.0	3.80	24.00	1.30	5343.57	6.46	299.09	557.0
STRUCTURE 43	RESVOR	.54	7	2	.10	.0	3.80	24.00	1.30	5325.15	6.47	299.14	557.1
XSECTION 2	RUNOFF	.22	7	2	.10	.0	3.80	24.00	1.25	---	6.12	196.37	892.6
XSECTION 2	REACH	.22	7	2	.10	.0	3.80	24.00	1.25	5349.58	6.27	170.90	776.8
STRUCTURE 46	RESVOR	.22	7	2	.10	.0	3.80	24.00	1.25	5347.08	6.28	171.54	779.7
XSECTION 22	RUNOFF	.56	7	2	.10	.0	3.80	24.00	1.79	---	6.23	558.95	996.3
XSECTION 22	REACH	.56	7	2	.10	.0	3.80	24.00	1.79	5464.73	6.47	445.02	793.3
STRUCTURE 28	RESVOR	.56	7	2	.10	.0	3.80	24.00	1.80	5258.30	6.48	445.17	793.5
XSECTION 10	REACH	.56	7	2	.10	.0	3.80	24.00	1.79	5327.16	6.70	396.37	706.5
XSECTION 10	RUNOFF	.35	7	2	.10	.0	3.80	24.00	1.82	---	6.14	438.85	1253.9
XSECTION 10	ADDDHYD	.91	7	2	.10	.0	3.80	24.00	1.80	5328.27	6.19	497.24	545.8
STRUCTURE 24	RESVOR	.91	7	2	.10	.0	3.80	24.00	1.80	5342.34	6.75	456.77	501.4
XSECTION 8	REACH	.91	7	2	.10	.0	3.80	24.00	1.80	5326.83	6.89	452.96	497.2
XSECTION 8	RUNOFF	.25	7	2	.10	.0	3.80	24.00	2.17	---	6.00	501.62	2006.5
XSECTION 8	ADDDHYD	1.16	7	2	.10	.0	3.80	24.00	1.88	5328.69	6.03	624.48	537.9

ALTERNATE 1 STORM 2

XSECTION 54	RUNOFF	.61	7	2	.10	.0	3.50	24.00	1.45	---	6.09	684.06	1125.1
XSECTION 56	RUNOFF	.24	7	2	.10	.0	3.50	24.00	1.64	---	6.07	318.40	1343.4
XSECTION 44	ADDDHYD	.84	7	2	.10	.0	3.50	24.00	1.50	5729.91	6.09	1001.27	1184.9
XSECTION 44	REACH	.84	7	2	.10	.0	3.50	24.00	1.50	5729.51	6.20	954.15	1129.2
XSECTION 44	RUNOFF	.13	7	2	.10	.0	3.50	24.00	.95	---	6.16	79.24	595.8
XSECTION 44	ADDDHYD	.98	7	2	.10	.0	3.50	24.00	1.43	5730.17	6.20	1031.59	1054.8
XSECTION 42	REACH	.98	7	2	.10	.0	3.50	24.00	1.43	5670.26	6.32	995.64	1018.0
XSECTION 42	RUNOFF	.28	7	2	.10	.0	3.50	24.00	1.03	---	6.18	175.42	628.7
XSECTION 42	ADDDHYD	1.26	7	2	.10	.0	3.50	24.00	1.34	5671.49	6.30	1135.43	903.3
XSECTION 46	RUNOFF	.38	7	2	.10	.0	3.50	24.00	.73	---	6.19	155.06	405.9
XSECTION 42	ADDDHYD	1.64	7	2	.10	.0	3.50	24.00	1.20	5672.64	6.29	1265.89	772.4
XSECTION 40	REACH	1.64	7	2	.10	.0	3.50	24.00	1.20	5592.13	6.45	1120.59	683.7
XSECTION 40	RUNOFF	.52	7	2	.10	.0	3.50	24.00	.95	---	6.22	268.50	518.3
XSECTION 40	ADDDHYD	2.16	7	2	.10	.0	3.50	24.00	1.14	5593.77	6.42	1294.21	600.0
XSECTION 18	REACH	2.16	7	2	.10	.0	3.50	24.00	1.14	5486.88	6.61	1138.89	528.0
XSECTION 18	RUNOFF	.45	7	2	.10	.0	3.50	24.00	1.12	---	6.33	223.38	493.1

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TR20 XEQ 03-23-99 13:18
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 SUMMARY
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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	2										
+														
XSECTION	18	ADDHYD	2.61	7	2	.10	.0	3.50	24.00	1.14	5487.77	6.58	1297.27	497.0
STRUCTURE	42	RESVOR	2.61	7	2	.10	.0	3.50	24.00	1.14	5262.94	6.75	1121.24	429.6
XSECTION	21	RUNOFF	.41	7	2	.10	.0	3.50	24.00	1.16	---	6.25	244.93	597.1
XSECTION	21	REACH	.41	7	2	.10	.0	3.50	24.00	1.16	5605.04	6.50	185.90	453.1
STRUCTURE	39	RESVOR	.41	7	2	.10	.0	3.50	24.00	1.15	5607.35	6.60	177.05	431.8
XSECTION	20	REACH	.41	7	2	.10	.0	3.50	24.00	1.16	5464.33	6.82	163.47	398.1
XSECTION	20	RUNOFF	.30	7	2	.10	.0	3.50	24.00	1.67	---	6.09	392.90	1314.0
XSECTION	20	ADDHYD	.71	7	2	.10	.0	3.50	24.00	1.37	5466.72	6.10	402.10	567.1
XSECTION	18	ADDHYD	3.32	7	2	.10	.0	3.50	24.00	1.19	5487.89	6.74	1319.68	397.1
XSECTION	6	REACH	3.32	7	2	.10	.0	3.50	24.00	1.19	5330.45	6.92	1283.35	386.7
XSECTION	6	RUNOFF	.45	7	2	.10	.0	3.50	24.00	1.28	---	6.17	359.01	790.1
XSECTION	6	ADDHYD	3.77	7	2	.10	.0	3.50	24.00	1.20	5330.83	6.90	1332.70	353.1
STRUCTURE	35	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.20	5354.15	6.90	1331.96	353.0
STRUCTURE	34	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.20	5347.53	6.91	1332.39	353.1
STRUCTURE	33	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.20	5324.78	6.92	1330.79	352.7
STRUCTURE	32	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.20	5315.77	6.92	1330.48	352.6
STRUCTURE	31	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.20	5304.78	6.92	1332.42	353.1
XSECTION	4	RUNOFF	.54	7	2	.10	.0	3.50	24.00	1.10	---	6.24	310.01	577.3
XSECTION	4	REACH	.54	7	2	.10	.0	3.50	24.00	1.10	5324.71	6.47	242.79	452.1
STRUCTURE	45	RESVOR	.54	7	2	.10	.0	3.50	24.00	1.10	5342.89	6.47	242.36	451.3
STRUCTURE	44	RESVOR	.54	7	2	.10	.0	3.50	24.00	1.10	5343.10	6.47	242.42	451.4
STRUCTURE	43	RESVOR	.54	7	2	.10	.0	3.50	24.00	1.10	5324.56	6.49	243.42	453.3
XSECTION	2	RUNOFF	.22	7	2	.10	.0	3.50	24.00	1.05	---	6.12	162.72	739.7
XSECTION	2	REACH	.22	7	2	.10	.0	3.50	24.00	1.05	5348.41	6.28	140.93	640.6
STRUCTURE	46	RESVOR	.22	7	2	.10	.0	3.50	24.00	1.05	5345.77	6.28	141.65	643.9
XSECTION	22	RUNOFF	.56	7	2	.10	.0	3.50	24.00	1.56	---	6.24	478.87	853.6
XSECTION	22	REACH	.56	7	2	.10	.0	3.50	24.00	1.56	5464.27	6.48	376.36	670.9
STRUCTURE	28	RESVOR	.56	7	2	.10	.0	3.50	24.00	1.56	5258.14	6.48	373.57	665.9
XSECTION	10	REACH	.56	7	2	.10	.0	3.50	24.00	1.56	5326.46	6.72	332.29	592.3
XSECTION	10	RUNOFF	.35	7	2	.10	.0	3.50	24.00	1.58	---	6.14	377.80	1079.4
XSECTION	10	ADDHYD	.91	7	2	.10	.0	3.50	24.00	1.57	5327.47	6.19	424.35	465.8
STRUCTURE	24	RESVOR	.91	7	2	.10	.0	3.50	24.00	1.57	5338.62	6.77	382.44	419.8
XSECTION	8	REACH	.91	7	2	.10	.0	3.50	24.00	1.57	5326.09	6.91	379.21	416.3
XSECTION	8	RUNOFF	.25	7	2	.10	.0	3.50	24.00	1.92	---	6.00	442.29	1769.2
XSECTION	8	ADDHYD	1.16	7	2	.10	.0	3.50	24.00	1.64	5327.83	6.04	547.49	471.6

ALTERNATE 1 STORM 3

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE			
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE	1	STORM	3										
XSECTION 54	RUNOFF	.61	7	2	.10	.0	3.10	24.00	1.16	---	6.10	538.59	885.8
XSECTION 56	RUNOFF	.24	7	2	.10	.0	3.10	24.00	1.32	---	6.08	255.85	1079.5
XSECTION 44	ADDHYD	.84	7	2	.10	.0	3.10	24.00	1.20	5728.16	6.09	793.38	938.9
XSECTION 44	REACH	.84	7	2	.10	.0	3.10	24.00	1.20	5727.78	6.21	747.13	884.2
XSECTION 44	RUNOFF	.13	7	2	.10	.0	3.10	24.00	.72	---	6.17	57.60	433.1
XSECTION 44	ADDHYD	.98	7	2	.10	.0	3.10	24.00	1.14	5728.25	6.21	803.45	821.5
XSECTION 42	REACH	.98	7	2	.10	.0	3.10	24.00	1.14	5668.10	6.34	749.84	766.7
XSECTION 42	RUNOFF	.28	7	2	.10	.0	3.10	24.00	.79	---	6.19	129.43	463.9
XSECTION 42	ADDHYD	1.26	7	2	.10	.0	3.10	24.00	1.06	5668.97	6.32	849.41	675.7
XSECTION 46	RUNOFF	.38	7	2	.10	.0	3.10	24.00	.54	---	6.20	105.64	276.5
XSECTION 42	ADDHYD	1.64	7	2	.10	.0	3.10	24.00	.94	5669.74	6.31	936.39	571.3
XSECTION 40	REACH	1.64	7	2	.10	.0	3.10	24.00	.94	5589.26	6.48	815.22	497.4
XSECTION 40	RUNOFF	.52	7	2	.10	.0	3.10	24.00	.72	---	6.23	193.89	374.3
XSECTION 40	ADDHYD	2.16	7	2	.10	.0	3.10	24.00	.89	5590.35	6.45	930.87	431.6
XSECTION 18	REACH	2.16	7	2	.10	.0	3.10	24.00	.89	5485.03	6.75	808.69	374.9
XSECTION 18	RUNOFF	.45	7	2	.10	.0	3.10	24.00	.87	---	6.34	165.91	366.2
XSECTION 18	ADDHYD	2.61	7	2	.10	.0	3.10	24.00	.88	5485.51	6.73	895.49	343.1
STRUCTURE 42	RESVOR	2.61	7	2	.10	.0	3.10	24.00	.88	5258.82	6.82	854.04	327.2
XSECTION 21	RUNOFF	.41	7	2	.10	.0	3.10	24.00	.90	---	6.26	181.85	443.5
XSECTION 21	REACH	.41	7	2	.10	.0	3.10	24.00	.90	5604.49	6.62	135.48	330.4
STRUCTURE 39	RESVOR	.41	7	2	.10	.0	3.10	24.00	.90	5605.63	6.67	133.79	326.3
XSECTION 20	REACH	.41	7	2	.10	.0	3.10	24.00	.90	5463.89	6.91	118.73	289.6
XSECTION 20	RUNOFF	.30	7	2	.10	.0	3.10	24.00	1.35	---	6.09	315.75	1056.0
XSECTION 20	ADDHYD	.71	7	2	.10	.0	3.10	24.00	1.09	5465.87	6.09	316.81	446.8
XSECTION 18	ADDHYD	3.32	7	2	.10	.0	3.10	24.00	.93	5486.08	6.82	997.02	300.4
XSECTION 6	REACH	3.32	7	2	.10	.0	3.10	24.00	.93	5327.94	7.00	953.27	287.2
XSECTION 6	RUNOFF	.45	7	2	.10	.0	3.10	24.00	1.00	---	6.18	274.83	605.4
XSECTION 6	ADDHYD	3.77	7	2	.10	.0	3.10	24.00	.94	5328.20	6.99	987.44	261.7
STRUCTURE 35	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.94	5353.33	6.99	986.33	261.4
STRUCTURE 34	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.94	5346.23	7.00	986.87	261.6
STRUCTURE 33	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.94	5323.96	7.01	986.53	261.5
STRUCTURE 32	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.94	5314.70	7.01	986.83	261.5
STRUCTURE 31	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.94	5303.95	7.01	986.60	261.5
XSECTION 4	RUNOFF	.54	7	2	.10	.0	3.10	24.00	.85	---	6.25	229.71	427.8
XSECTION 4	REACH	.54	7	2	.10	.0	3.10	24.00	.85	5323.90	6.49	174.61	325.2
STRUCTURE 45	RESVOR	.54	7	2	.10	.0	3.10	24.00	.85	5342.33	6.50	174.98	325.9

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REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 SUMMARY
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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	STANDARD CONTROL	DRAINAGE	RAIN TABLE	ANTEC MOIST	MAIN TIME	PRECIPITATION			RUNOFF	PEAK DISCHARGE			
ID	OPERATION	AREA (SQ MI)	#	COND	INCREM (HR)	BEGIN (HR)	AMOUNT (IN)	DURATION (HR)	AMOUNT (IN)	ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)
ALTERNATE 1 STORM 3													
STRUCTURE 44	RESVOR	.54	7	2	.10	.0	3.10	24.00	.85	5342.53	6.50	174.89	325.7
STRUCTURE 43	RESVOR	.54	7	2	.10	.0	3.10	24.00	.85	5323.73	6.51	174.47	324.9
XSECTION 2	RUNOFF	.22	7	2	.10	.0	3.10	24.00	.81	---	6.13	120.83	549.2
XSECTION 2	REACH	.22	7	2	.10	.0	3.10	24.00	.81	5346.95	6.29	103.88	472.2
STRUCTURE 46	RESVOR	.22	7	2	.10	.0	3.10	24.00	.81	5344.42	6.29	103.73	471.5
XSECTION 22	RUNOFF	.56	7	2	.10	.0	3.10	24.00	1.26	---	6.24	376.94	671.9
XSECTION 22	REACH	.56	7	2	.10	.0	3.10	24.00	1.25	5463.68	6.50	290.05	517.0
STRUCTURE 28	RESVOR	.56	7	2	.10	.0	3.10	24.00	1.25	5257.78	6.53	288.53	514.3
XSECTION 10	REACH	.56	7	2	.10	.0	3.10	24.00	1.26	5325.58	6.76	252.89	450.8
XSECTION 10	RUNOFF	.35	7	2	.10	.0	3.10	24.00	1.27	---	6.15	299.62	856.1
XSECTION 10	ADDHYD	.91	7	2	.10	.0	3.10	24.00	1.26	5326.45	6.19	332.07	364.5
STRUCTURE 24	RESVOR	.91	7	2	.10	.0	3.10	24.00	1.26	5334.08	6.81	291.51	320.0
XSECTION 8	REACH	.91	7	2	.10	.0	3.10	24.00	1.26	5325.19	6.95	289.22	317.5
XSECTION 8	RUNOFF	.25	7	2	.10	.0	3.10	24.00	1.58	---	6.00	364.65	1458.6
XSECTION 8	ADDHYD	1.16	7	2	.10	.0	3.10	24.00	1.33	5326.76	6.05	445.55	383.8

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REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

JOB 1 SUMMARY
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SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

HYDROGRAPH INFORMATION									ROUTING PARAMETERS						PEAK				
OUTFLOW+									VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIME		
XSEC REACH		INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	@PEAK	KIN	STOR-	KINE	
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	BASE	INCR	#	COEFF	POWER	FACTOR	O/I	(K)	COEFF	AGE	MATIC
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)		(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)	(HR)

ALTERNATE 1 STORM 1

+												2.20							
+ 44	4400	1158	6.1	1116	6.2			0	1.73	.10	1	1.37	.058	.964	268	.80?	.10	.07	
+						1211	6.2												
+ 42	5700	1211	6.2	1187	6.3			0	1.65	.10	1	.134	2.00	.021	.981	223	.89?	.10	.06
+						1359	6.3												
+ 40	6600	1521	6.3	1353	6.4			0	1.40	.10	1	1.88	1.36	.091	.889	442	.58	.10	.12
+						1586	6.4												
+ 18	5500	1586	6.4	1407	6.6			0	1.34	.10	1	.404	1.52	.080	.887	527	.51	.20	.15
+						1594	6.6												
+ 21	5500	289	6.2	227	6.5			0	1.36	.10	1	.915	1.39	.162	.786	870	.34	.30	.25
+						---	---												
+ 20	4500	209	6.6	195	6.8			0	1.36	.10	1	1.21	1.39	.065	.932	621	.45	.20	.17
+						466	6.1												
+ 6	5500	1516	6.8	1487	6.9			0	1.39	.10	1	.796	1.45	.032	.981	452	.57	.10	.13
+						1545	6.9												
+ 4	7200	370	6.2	296	6.5			0	1.30	.10	1	.767	1.52	.128	.800	742	.39	.30	.21
+						---	---												
+ 2	3750	195	6.1	169	6.3			0	1.25	.10	1	2.87	1.27	.099	.869	417	.60	.20	.12
+						---	---												
+ 22	9800	553	6.2	443	6.5			0	1.79	.10	1	1.78	1.38	.164	.801	824	.36	.30	.24
+						---	---												
+ 10	5000	444	6.5	396	6.7			0	1.80	.10	1	1.09	1.39	.082	.892	623	.45	.20	.18
+						497	6.2												
+ 8	3500	455	6.8	453	6.9			0	1.80	.10	1	1.14	1.42	.019	.995	364	.66	.10	.10
+						615	6.0												
	ALTERNATE	1	STORM	2															
+																			
+ 44	4400	998	6.1	954	6.2			0	1.50	.10	1	2.16	1.37	.060	.956	278	.79?	.10	.08
+						1032	6.2												
+ 42	5700	1032	6.2	992	6.3			0	1.43	.10	1	.121	2.00	.026	.962	255	.83?	.10	.07
+						1135	6.3												
+ 40	6600	1265	6.3	1095	6.4			0	1.20	.10	1	1.83	1.36	.093	.865	462	.56	.10	.13
+						1288	6.4												
+ 18	5500	1288	6.4	1138	6.6			0	1.14	.10	1	.384	1.53	.081	.884	562	.49	.20	.16
+						1296	6.6												
+ 21	5500	239	6.2	186	6.5			0	1.16	.10	1	.899	1.39	.166	.777	911	.33	.30	.26
+						---	---												
+ 20	4500	177	6.6	163	6.8			0	1.15	.10	1	1.20	1.40	.068	.922	647	.44	.20	.18

+						402	6.1													
+	6	5500	1315	6.7	1283	6.9			0	1.19	.10	1	.766	1.46	.034	.976	470	.55	.20	.1
+						1333	6.9													
+	4	7200	305	6.2	242	6.5			0	1.10	.10	1	.740	1.53	.133	.792	785	.37	.30	.2
+						---	---													
+	2	3750	161	6.1	140	6.3			0	1.05	.10	1	2.76	1.29	.096	.870	420	.60	.20	.13
+						---	---													
+	22	9800	473	6.2	376	6.5			0	1.56	.10	1	1.75	1.38	.168	.795	856	.35	.30	.25
+						---	---													
+	10	5000	373	6.5	332	6.7			0	1.56	.10	1	1.07	1.39	.083	.889	650	.43	.20	.1
+						424	6.2													
+	8	3500	382	6.8	379	6.9			0	1.57	.10	1	1.11	1.43	.019	.992	381	.64	.10	.11
+						536	6.0													
+	ALTERNATE				1	STORM	3													
+																				
+	44	4400	792	6.1	746	6.2			0	1.20	.10	1	2.11	1.38	.063	.941	294	.76?	.10	.08
+						802	6.2													
+	42	5700	802	6.2	737	6.3			0	1.14	.10	1	.102	2.00	.038	.918	314	.73?	.10	.09
+						844	6.3													
+	40	6600	935	6.3	812	6.5			0	.94	.10	1	1.77	1.37	.094	.869	497	.53	.20	.14
+						916	6.5													
+	18	5500	916	6.5	798	6.7			0	.89	.10	1	.355	1.55	.082	.871	623	.45	.10	.1
+						892	6.7													
+	21	5500	180	6.3	135	6.6			0	.90	.10	1	.877	1.40	.175	.752	978	.31	.20	.2
+						---	---													
1																				

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS						PEAK			
OUTFLOW+										VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIM	
XSEC REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	@PEAK	KIN	STOR-	KINE-		
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	BASE	INCR	#	COEFF	POWER	FACTOR	O/I	(K)	COEFF	AGE	MATIC
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)		(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)	(HR)

ALTERNATE	1	STORM	3																
+																			
+	20	4500	133	6.7	119	6.9		0	.90	.10	1	1.18	1.41	.071	.891	694	.41	.20	.20
+							317	6.1											
+	6	5500	995	6.8	953	7.0		0	.93	.10	1	.712	1.48	.035	.958	506	.52	.20	.14
+							987	7.0											
+	4	7200	224	6.2	175	6.5		0	.85	.10	1	.704	1.55	.141	.778	859	.35	.30	.25
+							---	---											
+	2	3750	119	6.1	104	6.3		0	.81	.10	1	2.63	1.32	.090	.874	426	.59	.20	.12
+							---	---											
+	22	9800	370	6.2	290	6.5		0	1.26	.10	1	1.71	1.39	.176	.783	910	.33	.30	.26
+							---	---											
+	10	5000	288	6.5	252	6.8		0	1.25	.10	1	1.03	1.40	.084	.876	693	.41	.30	.20
+							332	6.2											
+	8	3500	291	6.8	289	7.0		0	1.26	.10	1	1.07	1.44	.019	.990	408	.61	.20	.11
+							432	6.0											
1																			

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS1_OUT.TXT

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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	3
0 STRUCTURE 46	.22			
+				
ALTERNATE 1		171.54	141.65	103.73
0 STRUCTURE 45	.54			
+				
ALTERNATE 1		298.95	242.36	174.98
0 STRUCTURE 44	.54			
+				
ALTERNATE 1		299.09	242.42	174.89
0 STRUCTURE 43	.54			
+				
ALTERNATE 1		299.14	243.42	174.47
0 STRUCTURE 42	2.61			
+				
ALTERNATE 1		1285.69	1121.24	854.04
0 STRUCTURE 39	.41			
+				
ALTERNATE 1		209.52	177.05	133.79
0 STRUCTURE 35	3.77			
+				

ALTERNATE	1		1545.70	1331.96	986.33
0 STRUCTURE	34	3.77			
+					
ALTERNATE	1		1545.81	1332.39	986.87
0 STRUCTURE	33	3.77			
+					
ALTERNATE	1		1544.80	1330.79	986.53
0 STRUCTURE	32	3.77			
+					
ALTERNATE	1		1544.87	1330.48	986.83
0 STRUCTURE	31	3.77			
+					
ALTERNATE	1		1544.74	1332.42	986.60
0 STRUCTURE	28	.56			
+					
ALTERNATE	1		445.17	373.57	288.53
0 STRUCTURE	24	.91			
+					
ALTERNATE	1		456.77	382.44	291.51
0 XSECTION	2	.22			
+					
ALTERNATE	1		170.90	140.93	103.88
1					

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XSL_OUT.TXT

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	3
0 XSECTION 4	.54			
+				
ALTERNATE 1		298.95	242.79	174.61
0 XSECTION 6	3.77			
+				
ALTERNATE 1		1545.63	1332.70	987.44
0 XSECTION 8	1.16			
+				
ALTERNATE 1		624.48	547.49	445.55
0 XSECTION 10	.91			
+				
ALTERNATE 1		497.24	424.35	332.07
0 XSECTION 18	3.32			
+				
ALTERNATE 1		1519.62	1319.68	997.02
0 XSECTION 20	.71			
+				
ALTERNATE 1		465.66	402.10	316.81
0 XSECTION 21	.41			
+				
ALTERNATE 1		227.28	185.90	135.48
0 XSECTION 22	.56			
+				

ALTERNATE	1		445.02	376.36	290.05
0 XSECTION	40	2.16			
+					
ALTERNATE	1		1587.30	1294.21	930.87
0 XSECTION	42	1.64			
+					
ALTERNATE	1		1527.68	1265.89	936.39
0 XSECTION	44	.98			
+					
ALTERNATE	1		1210.82	1031.59	803.45
0 XSECTION	46	.38			
+					
ALTERNATE	1		196.23	155.06	105.64
0 XSECTION	54	.61			
+					
ALTERNATE	1		797.88	684.06	538.59
0 XSECTION	56	.24			
+					
ALTERNATE	1		366.84	318.40	255.85
1END OF 1 JOBS IN THIS RUN					
1					

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

JOB TR-20

SUMMARY NOPLOTS

TITLE SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW

TITLE EXISTING CONDITIONS : XS2_OUT.TXT

5 RAINFL 7	0.5				
8	0.0000	0.0040	0.0080	0.0100	0.0140
8	0.0190	0.0220	0.0260	0.0300	0.0450
8	0.0600	0.1000	0.7100	0.7500	0.7750
8	0.8000	0.8200	0.8300	0.8400	0.8500
8	0.8600	0.8700	0.8750	0.8850	0.8900
8	0.9000	0.9050	0.9100	0.9200	0.9250
8	0.9300	0.9350	0.9400	0.9450	0.9500
8	0.9550	0.9600	0.9650	0.9700	0.9730
8	0.9750	0.9800	0.9830	0.9870	0.9900
8	0.9930	0.9960	0.9999	1.0000	1.0000

9 ENDTBL

2 XSECTN 002	1.0		
8	5340.0	0.0	0.0
8	5340.7	10.0	2.84
8	5342.9	50.0	8.90
8	5346.8	100.0	15.35
8	5362.5	500.0	62.87
8	5392.8	1000.0	121.15

9 ENDTBL

2 XSECTN 004	1.0		
8	5320.0	0.0	0.0
8	5320.4	10.0	5.70
8	5321.4	50.0	15.46
8	5323.0	100.0	24.04
8	5327.8	500.0	71.09
8	5335.6	1000.0	118.03

9 ENDTBL

2 XSECTN 006	1.0		
8	5320.0	0.0	0.0
8	5320.3	10.0	6.72
8	5320.9	50.0	18.34
8	5322.0	100.0	28.60
8	5324.5	500.0	83.67
8	5328.3	1000.0	135.58

9 ENDTBL

2 XSECTN 008	1.0		
8	5320.0	0.0	0.0
8	5320.5	10.0	4.92
8	5321.6	50.0	14.17
8	5323.3	100.0	22.81
8	5327.3	500.0	72.00
8	5332.9	1000.0	119.77

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

9 ENDTBL

2 XSECTN 010	1.0		
--------------	-----	--	--

8	5320.0	0.0	0.0
8	5320.6	10.0	5.24
8	5321.9	50.0	15.74
8	5323.9	100.0	25.78
8	5328.3	500.0	83.60
8	5334.4	1000.0	139.88
9 ENDTBL			
2 XSECTN	012	1.0	
8	5300.0	0.0	0.0
8	5300.6	10.0	4.01
8	5302.1	50.0	12.53
8	5304.1	100.0	20.77
8	5308.4	500.0	68.46
8	5314.3	1000.0	114.90
9 ENDTBL			
2 XSECTN	014	1.0	
8	5280.0	0.0	0.0
8	5280.6	10.0	4.84
8	5281.9	50.0	14.85
8	5283.8	100.0	24.48
8	5288.0	500.0	80.08
8	5293.6	1000.0	134.18
9 ENDTBL			
2 XSECTN	016	1.0	
8	5250.0	0.0	0.0
8	5250.1	10.0	10.67
8	5250.4	50.0	28.19
8	5250.8	100.0	42.92
8	5251.9	500.0	115.15
8	5253.6	1000.0	177.46
9 ENDTBL			
2 XSECTN	018	1.0	
8	5480.0	0.0	0.0
8	5480.2	10.0	9.34
8	5480.7	50.0	25.00
8	5481.4	100.0	38.45
8	5483.3	500.0	107.48
8	5486.1	1000.0	170.17
9 ENDTBL			
2 XSECTN	020	1.0	
8	5460.0	0.0	0.0
8	5460.5	10.0	4.64
8	5461.8	50.0	14.20
8	5463.7	100.0	23.39

1

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

8	5467.7	500.0	76.44
8	5473.2	1000.0	128.05
9 ENDTBL			
2 XSECTN	022	1.0	
8	5460.0	0.0	0.0
8	5460.4	10.0	3.73
8	5461.2	50.0	11.22
8	5462.4	100.0	18.38
8	5465.1	500.0	59.55
8	5468.7	1000.0	99.55

9	ENDTBL			
2	XSECTN	024	1.0	
8			5420.0	0.0
8			5420.4	10.0
8			5421.5	50.0
8			5422.9	100.0
8			5426.1	500.0
8			5430.5	1000.0

9	ENDTBL			
2	XSECTN	026	1.0	
8			5490.0	0.0
8			5490.4	10.0
8			5491.3	50.0
8			5492.6	100.0
8			5495.4	500.0
8			5499.3	1000.0

9	ENDTBL			
2	XSECTN	028	1.0	
8			5250.0	0.0
8			5250.2	10.0
8			5250.7	50.0
8			5251.5	100.0
8			5253.3	500.0
8			5255.8	1000.0

9	ENDTBL			
2	XSECTN	030	1.0	
8			5310.0	0.0
8			5310.4	10.0
8			5311.2	50.0
8			5312.3	100.0
8			5314.5	500.0
8			5317.5	1000.0

9	ENDTBL			
2	XSECTN	032	1.0	
8			5360.0	0.0
8			5360.3	10.0

1

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

8			5361.2	50.0
8			5362.4	100.0
8			5365.4	500.0
8			5369.5	1000.0

9	ENDTBL			
2	XSECTN	034	1.0	
8			5390.0	0.0
8			5390.3	10.0
8			5391.1	50.0
8			5392.3	100.0
8			5395.1	500.0
8			5399.0	1000.0

9	ENDTBL			
2	XSECTN	036	1.0	
8			5420.0	0.0
8			5420.3	10.0
8			5421.2	50.0
8			5422.4	100.0

8	5425.3	500.0	77.04
8	5429.4	1000.0	127.69
9	ENDTBL		
2	XSECTN 038	1.0	
8	5460.0	0.0	0.0
8	5460.4	10.0	6.03
8	5461.5	50.0	17.81
8	5463.1	100.0	28.97
8	5466.7	500.0	92.93
8	5471.6	1000.0	155.04
9	ENDTBL		
2	XSECTN 040	1.0	
8	5580.0	0.0	0.0
8	5580.4	10.0	3.88
8	5581.5	50.0	11.54
8	5583.0	100.0	18.84
8	5586.3	500.0	60.74
8	5591.0	1000.0	101.47
9	ENDTBL		
2	XSECTN 042	1.0	
8	5660.0	0.0	0.0
8	5660.4	10.0	4.38
8	5661.4	50.0	14.55
8	5662.8	100.0	24.45
8	5665.9	500.0	81.67
8	5670.3	1000.0	91.87
9	ENDTBL		
2	XSECTN 044	1.0	

1

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

8	5720.0	0.0	0.0
8	5720.4	10.0	3.38
8	5721.3	50.0	9.97
8	5722.6	100.0	16.21
8	5725.7	500.0	51.99
8	5729.9	1000.0	86.76
9	ENDTBL		
2	XSECTN 046	1.0	
8	5720.0	0.0	0.0
8	5720.4	10.0	3.18
8	5721.2	50.0	9.36
8	5722.5	100.0	15.21
8	5725.4	500.0	48.65
8	5729.5	1000.0	81.14
9	ENDTBL		
2	XSECTN 048	1.0	
8	5560.0	0.0	0.0
8	5560.4	10.0	7.22
8	5561.1	50.0	23.33
8	5562.0	100.0	40.62
8	5563.6	500.0	135.83
8	5565.8	1000.0	228.43
9	ENDTBL		
2	XSECTN 050	1.0	
8	5490.0	0.0	0.0
8	5490.6	10.0	6.04

8	5491.9	50.0	18.37
8	5493.8	100.0	30.19
8	5498.0	500.0	98.33
8	5503.7	1000.0	164.59
9	ENDTBL		
2	XSECTN 052	1.0	
8	5490.0	0.0	0.0
8	5490.2	10.0	4.35
8	5490.8	50.0	11.99
8	5491.6	100.0	18.81
8	5493.6	500.0	56.00
8	5496.5	1000.0	91.35
9	ENDTBL		
2	XSECTN 054	1.0	
8	6010.0	0.0	0.0
8	6010.5	10.0	2.18
8	6011.5	50.0	6.70
8	6013.1	100.0	11.06
8	6016.5	500.0	36.27
8	6021.1	1000.0	60.83

1

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

9	ENDTBL		
2	XSECTN 056	1.0	
8	6000.0	0.0	0.0
8	6000.5	10.0	2.22
8	6001.6	50.0	6.83
8	6003.1	100.0	11.27
8	6006.5	500.0	36.98
8	6011.2	1000.0	62.03
9	ENDTBL		
2	XSECTN 058	1.0	
8	5680.0	0.0	0.0
8	5680.5	10.0	2.24
8	5681.6	50.0	6.90
8	5683.2	100.0	11.39
8	5686.6	500.0	37.38
8	5691.3	1000.0	62.71
9	ENDTBL		
2	XSECTN 060	1.0	
8	5680.0	0.0	0.0
8	5680.5	10.0	2.53
8	5681.7	50.0	7.85
8	5683.5	100.0	12.99
8	5687.2	500.0	42.75
8	5692.3	1000.0	71.75
9	ENDTBL		
2	XSECTN 062	1.0	
8	5700.0	0.0	0.0
8	5700.4	10.0	2.93
8	5701.4	50.0	8.94
8	5702.7	100.0	14.71
8	5705.7	500.0	48.02
8	5709.7	1000.0	80.42
9	ENDTBL		
3	STRUCT 01		

8	5280.0	0.0	0.0
8	5282.0	30.0	0.30
8	5284.0	188.0	1.49
8	5286.0	581.0	4.05
8	5287.0	1138.0	6.00
8	5288.0	1909.0	8.47
9 ENDTBL			
3 STRUCT	02		
8	5310.0	0.0	0.0
8	5312.0	57.0	0.27
8	5314.0	143.0	1.92
8	5316.0	260.0	6.24

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

8	5317.0	332.0	9.80
8	5318.0	385.0	14.51
9 ENDTBL			
3 STRUCT	03		
8	5330.0	0.0	0.0
8	5332.0	36.0	0.09
8	5334.0	78.0	0.38
8	5336.0	886.0	0.94
8	5337.0	1818.0	1.36
8	5338.0	3093.0	1.87
9 ENDTBL			
3 STRUCT	04		
8	5320.0	0.0	0.0
8	5322.0	35.0	0.04
8	5324.0	85.0	0.22
8	5326.0	120.0	0.59
8	5327.0	130.0	0.88
8	5328.0	145.0	1.25
8	5329.0	160.0	1.71
8	5330.0	170.0	2.26
9 ENDTBL			
3 STRUCT	07		
8	5360.0	0.0	0.0
8	5362.0	180.0	0.07
8	5364.0	480.0	0.35
8	5366.0	900.0	0.94
8	5367.0	1100.0	1.39
8	5368.0	1300.0	1.94
8	5369.0	1600.0	2.63
8	5370.0	1700.0	3.46
9 ENDTBL			
3 STRUCT	13		
8	5580.0	0.0	0.0
8	5582.0	150.0	0.16
8	5584.0	260.0	0.65
8	5586.0	400.0	1.57
8	5587.0	500.0	2.21
8	5588.0	625.0	2.98
8	5589.0	750.0	3.90
8	5590.0	900.0	4.98
8	5591.0	1100.0	6.22
8	5592.0	1200.0	7.63

8	5593.0	1300.0	9.23
8	5594.0	1500.0	11.03
8	5595.0	1600.0	13.03
8	5596.0	1800.0	14.23

1

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

8	5597.0	2000.0	15.48
8	5598.0	2100.0	16.77
9	ENDTBL		
3	STRUCT	18	
8	5320.0	0.0	0.0
8	5322.0	18.0	0.19
8	5324.0	45.0	0.76
8	5326.0	60.0	1.75
8	5327.0	70.0	2.42
8	5328.0	75.0	3.22
8	5329.0	80.0	4.15
8	5330.0	85.0	5.22

9	ENDTBL		
3	STRUCT	21	
8	5350.0	0.0	0.0
8	5352.0	30.0	0.03
8	5354.0	63.0	0.15
8	5356.0	90.0	0.42
8	5357.0	390.0	0.63
8	5358.0	1026.0	0.91

9	ENDTBL		
3	STRUCT	24	
8	5320.0	0.0	0.0
8	5322.0	26.0	0.04
8	5324.0	80.0	0.19
8	5326.0	140.0	0.49
8	5327.0	160.0	0.71
8	5328.0	180.0	0.99
8	5329.0	190.0	1.32
8	5330.0	210.0	1.73

9	ENDTBL		
3	STRUCT	28	
8	5250.0	0.0	0.0
8	5252.0	30.0	0.04
8	5254.0	88.0	0.19
8	5256.0	160.0	0.49
8	5257.0	200.0	0.71
8	5258.0	314.0	0.99
8	5259.0	747.0	1.32
8	5260.0	1446.0	1.73

9	ENDTBL		
3	STRUCT	31	
8	5300.0	0.0	0.0
8	5302.0	500.0	0.04
8	5304.0	1000.0	0.16
8	5406.0	1850.0	0.35

1

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

8	5407.0	2250.0	0.47
8	5408.0	2750.0	0.61
8	5409.0	3400.0	0.78
8	5410.0	4000.0	0.95

9 ENDTBL

3 STRUCT 32

8	5310.0	0.0	0.0
8	5312.0	380.0	0.04
8	5314.0	760.0	0.16
8	5316.0	1406.0	0.35
8	5317.0	1824.0	0.47
8	5318.0	2128.0	0.61
8	5319.0	2660.0	0.78
8	5320.0	3040.0	0.95

9 ENDTBL

3 STRUCT 33

8	5320.0	0.0	0.0
8	5322.0	400.0	0.05
8	5324.0	1000.0	0.21
8	5326.0	1850.0	0.52
8	5327.0	2500.0	0.74
8	5328.0	3000.0	1.01
8	5429.0	3500.0	1.34
8	5430.0	4000.0	1.73

9 ENDTBL

3 STRUCT 35

8	5350.0	0.0	0.0
8	5352.0	468.0	0.05
8	5354.0	1248.0	0.21
8	5356.0	2340.0	0.52
8	5357.0	2860.0	0.74
8	5358.0	3380.0	1.01
8	5359.0	3900.0	1.34

9 ENDTBL

3 STRUCT 34

8	5340.0	0.0	0.0
8	5342.0	225.0	0.05
8	5344.0	500.0	0.21
8	5346.0	925.0	0.52
8	5347.0	1200.0	0.74
8	5348.0	1450.0	1.01
8	5349.0	1750.0	1.34

9 ENDTBL

3 STRUCT 38

8	5570.0	0.0	0.0
8	5572.0	110.0	0.04

1

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

8	5574.0	200.0	0.20
8	5576.0	370.0	0.53
8	5577.0	480.0	0.77
8	5578.0	600.0	1.07
8	5579.0	700.0	1.43
8	5580.0	800.0	1.87

9	ENDTBL			
3	STRUCT	39		
8		5600.0	0.0	0.0
8		5602.0	26.0	0.03
8		5604.0	80.0	0.14
8		5606.0	146.0	0.39
8		5607.0	170.0	0.58
8		5608.0	190.0	0.83
8		5609.0	210.0	1.13
8		5610.0	220.0	1.50
9	ENDTBL			
3	STRUCT	41		
8		5500.0	0.0	0.0
8		5502.0	44.0	0.02
8		5504.0	130.0	0.10
8		5506.0	200.0	0.27
8		5507.0	434.0	0.41
8		5508.0	905.0	0.57
8		5509.0	1589.0	0.78
8		5510.0	2508.0	1.03
9	ENDTBL			
3	STRUCT	42		
8		5250.0	0.0	0.0
8		5252.0	90.0	0.16
8		5254.0	300.0	0.65
8		5256.0	540.0	1.57
8		5257.0	660.0	2.21
8		5258.0	780.0	2.98
8		5259.0	870.0	3.90
8		5260.0	900.0	4.98
8		5261.0	1020.0	6.22
8		5262.0	1065.0	7.63
8		5263.0	1125.0	9.23
8		5264.0	1656.0	11.03
8		5265.0	2702.0	13.03
9	ENDTBL			
3	STRUCT	43		
8		5320.0	0.0	0.0
8		5322.0	75.0	0.02
8		5324.0	190.0	0.08

1

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

8		5326.0	380.0	0.19
8		5327.0	475.0	0.26
8		5328.0	600.0	0.33
8		5329.0	650.0	0.41
8		5330.0	750.0	0.51
9	ENDTBL			
3	STRUCT	44		
8		5340.0	0.0	0.0
8		5342.0	112.0	0.02
8		5344.0	350.0	0.08
8		5346.0	602.0	0.19
8		5347.0	742.0	0.26
8		5348.0	840.0	0.33
8		5349.0	1070.0	0.41

8		5350.0	1432.0	0.51
9	ENDTBL			
3	STRUCT	45		
8		5340.0	0.0	0.0
8		5342.0	135.0	0.02
8		5344.0	375.0	0.08
8		5346.0	676.0	0.19
8		5347.0	826.0	0.26
8		5348.0	975.0	0.33
8		5349.0	1215.0	0.41
8		5350.0	1657.0	0.51
9	ENDTBL			
3	STRUCT	46		
8		5340.0	0.0	0.0
8		5344.0	44.0	0.02
8		5346.0	76.0	0.04
8		5347.0	92.0	0.05
8		5348.0	136.0	0.06
8		5349.0	264.0	0.08
8		5350.0	643.0	0.10
9	ENDTBL			
3	STRUCT	93		
8		5460.0	0.0	0.0
8		5466.0	1.0	81.78
8		5472.0	2.0	163.55
8		5478.0	3.0	245.33
8		5484.0	4.0	327.11
8		5487.0	5.0	368.00
8		5490.0	6.0	465.50
8		5493.0	7.0	563.00
9	ENDTBL			
3	STRUCT	94		

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

8		5498.0	0.0	0.0		
8		5504.0	1.0	51.78		
8		5510.0	2.0	103.56		
8		5516.0	3.0	155.33		
8		5522.0	4.0	207.11		
8		5525.0	5.0	233.00		
9	ENDTBL					
6	RUNOFF 1 058	7	0.7410	71.2	0.457	1
6	RUNOFF 1 060	6	0.6680	73.3	0.518	1
6	ADDHYD 4 060	7 6 5				1
6	RUNOFF 1 062	7	0.2680	69.5	0.532	1
6	ADDHYD 4 062	5 7 6				1
6	REACH 3 050	6 4	8600.0			1
6	RUNOFF 1 050	3	0.2570	86.5	0.725	1
6	ADDHYD 4 050	4 3 1				1
6	RUNOFF 1 052	6	1.3440	90.1	0.340	1
6	ADDEHD 4 052	1 6 2				1
6	REACH 3 038	2 7	2700.0			1
6	RUNOFF 1 038	6	0.2440	76.1	0.542	1
6	ADDHYD 4 038	7 6 5				1
6	RESVOR 2 93 5	4	5460.0			1 1
6	REACH 3 036	4 5	3000.0			1

6	RUNOFF	1	036	2	0.1840	74.4	0.457	1
6	ADDHYD	4	036	5 2 1				1
6	REACH	3	032	1 6	4200.0			1
6	RUNOFF	1	032	5	0.4330	73.8	0.525	1
6	ADDHYD	4	032	6 5 4				1
6	RESVOR	2	07 4	3	5360.0			1 1
6	REACH	3	030	3 7	3400.0			1
6	RUNOFF	1	030	6	0.2740	71.5	0.530	1
6	ADDHYD	4	030	7 6 5				1
6	RUNOFF	1	034	3	0.1800	69.0	0.377	1
6	ADDHYD	4	034	5 3 2				1
6	RESVOR	2	02 2	7	5310.0			1 1
6	REACH	3	028	7 6	4200.0			1
6	RUNOFF	1	028	5	0.1920	68.7	1.013	1
6	ADDHYD	4	028	6 5 4				1
6	RESVOR	2	01 4	1	5280.0			1 1
6	RUNOFF	1	016	7	0.3000	70.9	0.553	1
6	REACH	3	016	7 6	3500.0			1
6	RESVOR	2	18 6	2	5320.0			1 1
6	RUNOFF	1	014	3	0.7610	76.1	0.526	1
6	RUNOFF	1	048	7	0.3090	73.9	0.762	1
6	REACH	3	026	7 6	4300.0			1
6	RUNOFF	1	026	5	0.4090	74.6	0.397	1
6	ADDHYD	4	026	6 5 4				1

1

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

6	RESVOR	2	94 4	7	5498.0			1 1
6	REACH	3	024	7 6	4200.0			1
6	RUNOFF	1	024	5	0.4850	72.4	0.509	1
6	ADDHYD	4	024	6 5 4				1
6	REACH	3	012	4 6	5500.0			1
6	RUNOFF	1	012	5	0.6570	80.2	0.419	1
6	ADDHYD	4	012	6 5 4				1
ENDATA								
7	INCREM	6			0.1			
7	COMPUT	7 058	012		0.0	3.80	1.0	7 2 01 01
ENDCMP 1								
7	INCREM	6			0.1			
7	COMPUT	7 058	012		0.0	3.50	1.0	7 2 01 02
ENDCMP 1								
7	INCREM	6			0.1			
7	COMPUT	7 058	012		0.0	3.10	1.0	7 2 01 03
ENDCMP 1								
ENDJOB 2								

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

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

+ MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

+ FROM XSECTION 58
+ TO XSECTION 12

STARTING TIME = .00	RAIN DEPTH = 3.80	RAIN DURATION= 1.00	RAIN TABLE NO.= 7	ANT. MOIST. COND= 2
ALTERNATE NO.= 1	STORM NO.= 1	MAIN TIME INCREMENT = .10 HOURS		

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	588.29	(RUNOFF)
10.44	22.28	(RUNOFF)
11.57	20.83	(RUNOFF)
12.57	21.11	(RUNOFF)
14.08	21.23	(RUNOFF)
18.92	11.92	(RUNOFF)
20.60	10.96	(RUNOFF)
21.57	9.29	(RUNOFF)
23.50	9.00	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	558.28	(RUNOFF)
10.46	21.43	(RUNOFF)
11.60	19.57	(RUNOFF)
12.60	19.73	(RUNOFF)
14.11	19.79	(RUNOFF)
18.94	11.35	(RUNOFF)
20.63	10.15	(RUNOFF)
21.60	8.76	(RUNOFF)
23.53	8.42	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	172.87	(RUNOFF)
10.46	7.65	(RUNOFF)
11.61	6.96	(RUNOFF)
12.61	7.04	(RUNOFF)
14.12	7.08	(RUNOFF)
18.94	4.11	(RUNOFF)
23.53	3.05	(RUNOFF)

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 1
 PAGE 1

OPERATION ADDHYD CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	1314.61	5712.22
10.45	51.41	5701.44
11.59	47.32	5701.33
12.59	47.84	5701.35
14.10	48.06	5701.35
18.93	27.39	5700.83
20.62	24.74	5700.77

21.58	21.22	5700.68
23.52	20.45	5700.66

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 50 BY 312.1 CFS

OPERATION REACH CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.52	933.43	5502.94
10.67	51.21	5491.95
11.90	43.50	5491.69
12.90	43.75	5491.70
14.42	43.08	5491.68
19.16	27.37	5491.16
20.97	22.13	5490.99
21.88	20.55	5490.94
23.79	19.28	5490.90

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	328.86	(RUNOFF)
10.37	11.08	(RUNOFF)
11.70	9.51	(RUNOFF)
12.70	9.42	(RUNOFF)
14.22	9.32	(RUNOFF)
18.86	5.66	(RUNOFF)
23.59	3.96	(RUNOFF)

OPERATION ADDEHYD CROSS SECTION 50

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
 PAGE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	1181.56	5505.77
10.49	62.16	5492.36
11.86	52.34	5491.99
12.87	52.54	5492.00
14.40	51.69	5491.96
18.97	32.99	5491.35
20.94	26.55	5491.14
21.85	24.65	5491.08
23.75	22.82	5491.02

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	2963.29	(RUNOFF)
10.37	61.27	(RUNOFF)
11.52	58.94	(RUNOFF)
12.52	59.07	(RUNOFF)

14.02	59.24	(RUNOFF)
18.87	31.01	(RUNOFF)
20.53	29.65	(RUNOFF)
21.51	24.36	(RUNOFF)
23.47	23.85	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	3329.70	5510.01
10.40	123.39	5491.72
11.57	105.38	5491.63
12.57	105.08	5491.63
14.09	102.17	5491.61
18.92	64.00	5491.02
20.62	50.99	5490.82
21.55	48.07	5490.77
23.50	45.18	5490.73

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 2321.9 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 1
PAGE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	3283.61	5493.98
10.50	123.38	5463.31
11.67	105.05	5463.15
12.68	104.72	5463.14
14.20	101.72	5463.12
19.02	63.99	5461.95
20.73	50.79	5461.53
21.66	48.02	5461.45
23.61	45.04	5461.36

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	231.77	(RUNOFF)
10.42	8.42	(RUNOFF)
11.61	7.62	(RUNOFF)
12.61	7.69	(RUNOFF)
14.12	7.70	(RUNOFF)
18.95	4.43	(RUNOFF)
23.54	3.26	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	3515.23	5496.25
10.47	131.81	5463.39
11.67	112.60	5463.21
12.68	112.31	5463.21
14.19	109.25	5463.18
18.97	68.43	5462.09
20.72	54.63	5461.65
21.65	51.41	5461.54
23.60	48.26	5461.45

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 4.82 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.70	4.82	5486.46

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.52 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .01 .02 .06 .18				
6.00	DISCHG	.38 .67 1.01 1.34 1.63 1.86 2.05 2.22 2.36 2.48				

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
PAGE 4

7.00	DISCHG	2.58	2.66	2.73	2.79	2.85	2.89	2.94	2.97	3.01	3.05
8.00	DISCHG	3.08	3.11	3.14	3.16	3.19	3.21	3.23	3.25	3.27	3.28
9.00	DISCHG	3.30	3.31	3.33	3.34	3.35	3.37	3.38	3.39	3.41	3.42
10.00	DISCHG	3.43	3.45	3.46	3.47	3.48	3.50	3.51	3.52	3.54	3.55
11.00	DISCHG	3.56	3.57	3.58	3.58	3.59	3.60	3.62	3.63	3.64	3.65
12.00	DISCHG	3.66	3.67	3.67	3.68	3.69	3.70	3.71	3.72	3.73	3.74
13.00	DISCHG	3.75	3.76	3.77	3.78	3.79	3.79	3.80	3.81	3.82	3.82
14.00	DISCHG	3.83	3.84	3.85	3.86	3.87	3.88	3.89	3.90	3.91	3.92
15.00	DISCHG	3.92	3.93	3.94	3.95	3.95	3.96	3.97	3.97	3.98	3.98
16.00	DISCHG	3.99	4.00	4.01	4.02	4.03	4.05	4.06	4.07	4.09	4.10
17.00	DISCHG	4.11	4.12	4.14	4.15	4.16	4.18	4.19	4.20	4.22	4.23
18.00	DISCHG	4.24	4.25	4.27	4.28	4.29	4.31	4.32	4.33	4.34	4.36
19.00	DISCHG	4.37	4.38	4.40	4.41	4.42	4.43	4.44	4.45	4.46	4.47
20.00	DISCHG	4.47	4.48	4.49	4.49	4.50	4.51	4.52	4.53	4.54	4.55
21.00	DISCHG	4.56	4.57	4.58	4.59	4.60	4.60	4.61	4.62	4.63	4.64
22.00	DISCHG	4.65	4.66	4.67	4.68	4.68	4.69	4.70	4.71	4.71	4.72
23.00	DISCHG	4.73	4.74	4.74	4.75	4.76	4.77	4.78	4.79	4.79	4.80
24.00	DISCHG	4.81	4.81	4.81	4.82	4.82	4.82	4.82	4.82	4.82	4.82
25.00	DISCHG	4.82	4.82	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81
26.00	DISCHG	4.81	4.81	4.81	4.81	4.81	4.80	4.80	4.80	4.80	4.80
27.00	DISCHG	4.80	4.80	4.80	4.80	4.80	4.79	4.79	4.79	4.79	4.79
28.00	DISCHG	4.79	4.79	4.79	4.79	4.79	4.78	4.78	4.78	4.78	4.78
29.00	DISCHG	4.78	4.78	4.78	4.78	4.78	4.78	4.77	4.77	4.77	4.77

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

0 *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 4.77 CFS, 99.01 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 4.81 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.10	4.81	5420.14

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	175.35	(RUNOFF)
10.42	6.07	(RUNOFF)
11.57	5.67	(RUNOFF)
12.57	5.73	(RUNOFF)
14.08	5.75	(RUNOFF)
18.90	3.21	(RUNOFF)
23.50	2.42	(RUNOFF)

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TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

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OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	175.55	5422.95
10.46	9.52	5420.29
11.58	9.23	5420.28
12.58	9.40	5420.28
14.08	9.55	5420.29
18.97	7.53	5420.23
23.51	7.15	5420.21

OPERATION REACH CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	139.74	5362.70
10.58	9.49	5360.28
11.76	8.88	5360.27
12.76	9.02	5360.27
14.28	9.14	5360.27
19.10	7.51	5360.23
23.67	7.05	5360.21

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	366.25	(RUNOFF)
10.46	14.09	(RUNOFF)
11.61	12.81	(RUNOFF)
12.61	12.95	(RUNOFF)
14.11	12.98	(RUNOFF)
18.88	7.45	(RUNOFF)
20.64	6.64	(RUNOFF)

21.60	5.74	(RUNOFF)
23.53	5.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	485.00	5365.29
10.47	23.55	5360.60
11.64	21.42	5360.56
12.64	21.69	5360.56
14.15	21.84	5360.57
18.96	14.95	5360.41
20.69	13.69	5360.38
21.64	12.69	5360.36
23.56	12.51	5360.36

OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	485.07	5364.02
10.47	23.55	5360.26
11.65	21.42	5360.24
12.64	21.69	5360.24
14.16	21.83	5360.24
18.96	14.94	5360.17
20.69	13.69	5360.15
21.64	12.69	5360.14
23.56	12.50	5360.14

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 4.14 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .27	8.37	41.05 122.69
6.00	DISCHG 244.94 383.27 474.56 472.08 401.69 308.83 234.51	180.57	135.36 110.98
7.00	DISCHG 86.71 76.11 64.75 60.87 55.43 54.25 51.39	50.79	48.32 47.11
8.00	DISCHG 44.97 43.83 41.18 37.99 33.83 30.60 27.86	26.27	25.00 24.33
9.00	DISCHG 23.78 23.55 23.32 23.27 23.19 23.21 23.19	23.24	23.26 23.31
10.00	DISCHG 23.33 23.38 23.41 23.46 23.49 23.54 23.34	22.57	21.02 19.15
11.00	DISCHG 17.46 16.45 16.40 17.41 18.95 20.40 21.32	21.28	20.27 18.75
12.00	DISCHG 17.32 16.41 16.50 17.55 19.11 20.61 21.58	21.52	20.51 19.00
13.00	DISCHG 17.50 16.37 15.60 15.08 14.73 14.52 14.61	15.38	16.91 18.82
14.00	DISCHG 20.60 21.67 21.73 20.75 19.22 17.74 16.61	15.85	15.32 14.98
15.00	DISCHG 14.75 14.61 14.52 14.47 14.43 14.42 14.41	14.42	14.43 14.44
16.00	DISCHG 14.45 14.46 14.47 14.49 14.50 14.51 14.52	14.54	14.55 14.57
17.00	DISCHG 14.59 14.60 14.62 14.64 14.66 14.67 14.69	14.71	14.73 14.75
18.00	DISCHG 14.77 14.78 14.80 14.82 14.84 14.86 14.87	14.89	14.91 14.93
19.00	DISCHG 14.94 14.86 14.53 13.89 13.11 12.40 11.82	11.29	10.72 10.17
20.00	DISCHG 9.72 9.53 9.84 10.68 11.78 12.82 13.50	13.69	13.40 12.86
21.00	DISCHG 12.29 11.92 11.81 11.94 12.22 12.50 12.67	12.65	12.43 12.10
22.00	DISCHG 11.80 11.56 11.41 11.30 11.24 11.20 11.18	11.16	11.16 11.16
23.00	DISCHG 11.17 11.22 11.39 11.70 12.07 12.39 12.46	11.96	10.83 9.39
24.00	DISCHG 8.04 7.04 6.34 5.83 5.48 5.24 5.08	4.98	4.92 4.87

25.00	DISCHG	4.84	4.83	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81
26.00	DISCHG	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.80	4.80	4.80

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TR20 XEQ 03-23-99 10:37
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27.00	DISCHG	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.79	4.79	4.79
28.00	DISCHG	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.78	4.78	4.78
29.00	DISCHG	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.77	4.77

OPERATION REACH CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.42	434.27	5314.14
10.58	23.50	5310.67
11.81	20.88	5310.62
12.81	21.11	5310.62
14.32	21.20	5310.62
19.08	14.93	5310.50
20.87	13.36	5310.47
21.80	12.59	5310.45
23.70	12.31	5310.45

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	202.94	(RUNOFF)
10.43	8.31	(RUNOFF)
11.61	7.58	(RUNOFF)
12.61	7.65	(RUNOFF)
14.12	7.69	(RUNOFF)
18.94	4.44	(RUNOFF)
23.54	3.29	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	581.05	5314.99
10.48	31.77	5310.84
11.73	27.83	5310.76
12.74	28.14	5310.76
14.25	28.17	5310.76
18.98	19.36	5310.59
20.80	16.97	5310.54
21.72	15.89	5310.52
23.61	15.39	5310.51

OPERATION RUNOFF CROSS SECTION 34

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	141.52	(RUNOFF)
7.47	11.79	(RUNOFF)
10.45	5.07	(RUNOFF)
11.54	4.85	(RUNOFF)
12.54	4.91	(RUNOFF)
14.04	4.97	(RUNOFF)
18.95	2.73	(RUNOFF)
23.48	2.11	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	659.25	5396.34
10.46	36.83	5390.84
11.68	32.09	5390.74
12.68	32.44	5390.75
14.20	32.44	5390.75
18.96	22.09	5390.54
20.74	19.16	5390.48
21.66	17.93	5390.46
23.57	17.40	5390.45

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.68	388.06	5318.06
10.49	36.80	5311.29
11.73	31.90	5311.12
12.74	32.23	5311.13
14.26	32.19	5311.13
18.98	22.07	5310.77
20.81	19.06	5310.67
21.72	17.89	5310.63
23.61	17.26	5310.61

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.59 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.10	2.67	20.68	66.19
6.00	DISCHG	118.70	183.69	257.19	316.40	352.15	373.46	385.34	387.96	382.92	372.11
7.00	DISCHG	357.46	340.60	315.87	285.62	257.36	225.19	198.25	175.82	157.13	140.43
8.00	DISCHG	117.84	102.29	91.05	82.21	74.63	67.83	61.69	55.08	44.03	41.12
9.00	DISCHG	39.40	38.26	37.50	37.02	36.73	36.56	36.47	36.44	36.45	36.48
10.00	DISCHG	36.52	36.57	36.63	36.69	36.74	36.79	36.71	36.06	34.58	32.45
11.00	DISCHG	30.07	27.90	26.61	26.58	27.60	29.22	30.87	31.83	31.66	30.53
12.00	DISCHG	28.85	27.20	26.27	26.48	27.67	29.42	31.13	32.14	32.00	30.86
13.00	DISCHG	29.17	27.34	25.68	24.32	23.29	22.55	22.20	22.58	23.93	26.03

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14.00	DISCHG	28.45	30.67	32.02	32.09	31.08	29.45	27.65	26.00	24.65	23.63
15.00	DISCHG	22.89	22.37	22.03	21.80	21.65	21.55	21.50	21.47	21.46	21.46
16.00	DISCHG	21.47	21.48	21.49	21.51	21.52	21.54	21.56	21.57	21.59	21.61
17.00	DISCHG	21.63	21.65	21.67	21.69	21.71	21.74	21.76	21.78	21.80	21.82
18.00	DISCHG	21.85	21.87	21.89	21.91	21.94	21.96	21.98	22.01	22.03	22.05
19.00	DISCHG	22.07	22.03	21.75	21.11	20.20	19.18	18.17	17.18	16.19	15.23
20.00	DISCHG	14.37	13.73	13.59	14.14	15.23	16.57	17.86	18.75	19.06	18.85
21.00	DISCHG	18.34	17.74	17.29	17.12	17.21	17.45	17.73	17.88	17.81	17.55
22.00	DISCHG	17.17	16.78	16.43	16.14	15.93	15.78	15.68	15.62	15.58	15.55
23.00	DISCHG	15.55	15.57	15.71	16.02	16.45	16.92	17.25	17.07	16.12	14.58
24.00	DISCHG	12.77	10.97	9.38	8.10	7.12	6.40	5.88	5.51	5.27	5.10
25.00	DISCHG	4.99	4.92	4.87	4.85	4.83	4.82	4.82	4.82	4.81	4.81
26.00	DISCHG	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.80	4.80
27.00	DISCHG	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.79	4.79
28.00	DISCHG	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.78	4.78
29.00	DISCHG	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.77

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.06	357.20	5252.66
10.59	36.77	5250.53
11.94	30.66	5250.46
12.96	30.73	5250.46
14.52	30.09	5250.45
19.15	22.03	5250.35
21.90	17.69	5250.30
23.80	16.71	5250.28

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	70.91	(RUNOFF)
12.85	4.34	(RUNOFF)
14.39	4.25	(RUNOFF)
18.97	2.87	(RUNOFF)
23.66	1.94	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.93	400.43	5252.85
11.93	34.98	5250.51
12.95	35.02	5250.51
14.50	34.27	5250.50
19.10	24.88	5250.39
21.89	19.81	5250.32
23.78	18.61	5250.31

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.02	398.19	5285.07
12.01	34.78	5282.06
13.03	34.79	5282.06
14.60	33.99	5282.05
19.17	24.87	5281.66
21.98	19.76	5281.32
23.86	18.45	5281.23

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.78 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.11	.92	4.88
6.00	DISCHG	17.12	44.21	88.45	143.21	205.54	268.25	317.63	354.30	379.01	392.97
7.00	DISCHG	397.98	396.27	389.73	378.76	362.90	342.85	319.57	294.16	268.43	243.70
8.00	DISCHG	220.64	198.49	178.01	159.42	142.22	127.01	113.73	102.15	91.89	82.11
9.00	DISCHG	72.94	65.30	59.27	54.64	51.14	48.54	46.62	45.21	44.20	43.47
10.00	DISCHG	42.96	42.61	42.38	42.23	42.15	42.10	42.08	42.05	41.90	41.47
11.00	DISCHG	40.61	39.29	37.62	35.85	34.33	33.33	32.99	33.26	33.87	34.48
12.00	DISCHG	34.77	34.58	33.93	33.04	32.24	31.83	31.96	32.59	33.48	34.31
13.00	DISCHG	34.76	34.66	34.04	33.01	31.76	30.45	29.35	28.39	27.62	27.25
14.00	DISCHG	27.43	28.19	29.44	31.14	32.71	33.69	33.99	33.65	32.84	31.74
15.00	DISCHG	30.54	29.49	28.56	27.68	26.92	26.29	25.79	25.39	25.09	24.86
16.00	DISCHG	24.70	24.58	24.49	24.44	24.40	24.38	24.37	24.37	24.38	24.39
17.00	DISCHG	24.40	24.41	24.43	24.44	24.46	24.48	24.51	24.53	24.55	24.57
18.00	DISCHG	24.60	24.62	24.64	24.67	24.69	24.72	24.74	24.76	24.79	24.81
19.00	DISCHG	24.84	24.86	24.87	24.83	24.68	24.35	23.84	23.15	22.33	21.41
20.00	DISCHG	20.43	19.43	18.46	17.62	17.02	16.77	16.92	17.42	18.13	18.89
21.00	DISCHG	19.53	19.93	20.08	20.03	19.87	19.71	19.62	19.61	19.67	19.74
22.00	DISCHG	19.76	19.70	19.54	19.31	19.03	18.74	18.47	18.22	18.01	17.84
23.00	DISCHG	17.70	17.59	17.52	17.49	17.53	17.66	17.88	18.15	18.38	18.43
24.00	DISCHG	18.14	17.46	16.42	15.12	13.69	12.25	10.90	9.70	8.67	7.81
25.00	DISCHG	7.11	6.56	6.12	5.79	5.53	5.34	5.19	5.09	5.01	4.96
26.00	DISCHG	4.91	4.89	4.86	4.85	4.84	4.83	4.82	4.82	4.81	4.81
27.00	DISCHG	4.81	4.81	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
28.00	DISCHG	4.80	4.80	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79
29.00	DISCHG	4.79	4.79	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78

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OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	207.70	(RUNOFF)
10.43	8.93	(RUNOFF)
11.62	8.09	(RUNOFF)
12.62	8.17	(RUNOFF)
14.12	8.20	(RUNOFF)
18.90	4.79	(RUNOFF)
23.55	3.53	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	168.11	5250.99
10.56	8.92	5250.09
11.81	7.66	5250.08
12.81	7.71	5250.08
14.33	7.67	5250.08
19.05	4.78	5250.05
23.70	3.40	5250.03

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	80.84	5329.17
10.61	8.90	5320.99
11.92	7.47	5320.83
12.92	7.51	5320.83
14.45	7.44	5320.83
19.08	4.78	5320.53
23.78	3.32	5320.37

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .30 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.36	2.70
6.00	DISCHG	10.64	24.48	44.05	54.54	66.61	73.47	77.13	79.47	80.60	80.83
7.00	DISCHG	80.41	79.41	77.94	76.20	74.20	71.92	69.13	63.93	59.18	54.79
8.00	DISCHG	50.80	47.17	41.88	34.17	28.63	24.46	21.17	18.50	15.12	12.77
9.00	DISCHG	11.37	10.48	9.91	9.53	9.27	9.11	9.00	8.93	8.89	8.87
10.00	DISCHG	8.86	8.86	8.86	8.87	8.88	8.89	8.90	8.89	8.82	8.60
11.00	DISCHG	8.20	7.66	7.08	6.60	6.33	6.35	6.60	6.97	7.30	7.47
12.00	DISCHG	7.38	7.09	6.69	6.34	6.17	6.26	6.55	6.96	7.32	7.50
13.00	DISCHG	7.43	7.15	6.73	6.29	5.89	5.55	5.29	5.11	5.06	5.19
14.00	DISCHG	5.54	6.07	6.65	7.14	7.41	7.40	7.15	6.76	6.33	5.94
15.00	DISCHG	5.61	5.35	5.15	5.01	4.91	4.84	4.79	4.75	4.73	4.72

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 1
PAGE 12

16.00	DISCHG	4.71	4.71	4.70	4.70	4.71	4.71	4.71	4.71	4.72	4.72
17.00	DISCHG	4.72	4.72	4.73	4.73	4.73	4.74	4.74	4.74	4.74	4.75
18.00	DISCHG	4.75	4.75	4.76	4.76	4.76	4.76	4.77	4.77	4.77	4.78
19.00	DISCHG	4.78	4.78	4.78	4.74	4.64	4.47	4.24	3.98	3.71	3.45
20.00	DISCHG	3.19	2.94	2.72	2.58	2.57	2.71	2.98	3.30	3.59	3.78
21.00	DISCHG	3.84	3.79	3.67	3.55	3.45	3.42	3.44	3.49	3.55	3.57
22.00	DISCHG	3.54	3.47	3.37	3.28	3.19	3.11	3.06	3.02	2.98	2.96
23.00	DISCHG	2.95	2.94	2.93	2.95	2.99	3.07	3.18	3.28	3.32	3.23
24.00	DISCHG	2.97	2.58	2.12	1.67	1.28	.95	.69	.49	.34	.24
25.00	DISCHG	.16	.11	.07	.05	.03	.02	.01	.00		

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	727.77	(RUNOFF)

10.42	26.28	(RUNOFF)
11.61	23.94	(RUNOFF)
12.61	24.10	(RUNOFF)
14.11	24.16	(RUNOFF)
18.95	13.83	(RUNOFF)
20.64	12.31	(RUNOFF)
21.60	10.65	(RUNOFF)
23.53	10.23	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	203.25	(RUNOFF)
10.41	10.03	(RUNOFF)
11.72	8.57	(RUNOFF)
12.72	8.64	(RUNOFF)
14.24	8.50	(RUNOFF)
18.96	5.33	(RUNOFF)
23.59	3.72	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.53	183.83	5493.19
10.55	10.02	5490.40
11.89	8.36	5490.33
12.89	8.40	5490.34
14.42	8.23	5490.33
19.06	5.33	5490.21
23.75	3.65	5490.15

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
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OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	431.91	(RUNOFF)
7.45	32.37	(RUNOFF)
10.42	13.59	(RUNOFF)
11.55	12.98	(RUNOFF)
12.55	13.12	(RUNOFF)
14.05	13.19	(RUNOFF)
18.95	7.20	(RUNOFF)
20.57	6.76	(RUNOFF)
21.55	5.64	(RUNOFF)
23.49	5.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 26

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

6.16	494.03	5495.36
10.44	23.61	5490.71
11.58	20.46	5490.64
12.58	20.49	5490.64
14.10	20.01	5490.63
18.95	12.52	5490.46
20.62	10.18	5490.40
21.56	9.47	5490.38
23.52	8.95	5490.36

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.06 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.50	1.06	5504.37

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.72 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.03
6.00	DISCHG	.08	.14	.22	.29	.55
7.00	DISCHG	.57	.59	.61	.62	.69
8.00	DISCHG	.69	.70	.71	.72	.75
9.00	DISCHG	.75	.76	.76	.77	.79
10.00	DISCHG	.79	.79	.80	.80	.82
11.00	DISCHG	.82	.83	.83	.83	.85
12.00	DISCHG	.85	.85	.86	.86	.88
13.00	DISCHG	.88	.88	.88	.89	.90
14.00	DISCHG	.90	.90	.91	.91	.92

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 1
PAGE 14

15.00	DISCHG	.93	.93	.93	.93	.93	.94	.94	.94	.94	.94
16.00	DISCHG	.94	.95	.95	.95	.95	.95	.96	.96	.96	.96
17.00	DISCHG	.96	.96	.97	.97	.97	.97	.97	.98	.98	.98
18.00	DISCHG	.98	.98	.98	.99	.99	.99	.99	.99	1.00	1.00
19.00	DISCHG	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01
20.00	DISCHG	1.01	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.02
21.00	DISCHG	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04
22.00	DISCHG	1.04	1.04	1.04	1.04	1.04	1.04	1.05	1.05	1.05	1.05
23.00	DISCHG	1.05	1.05	1.05	1.05	1.05	1.06	1.06	1.06	1.06	1.06
24.00	DISCHG	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
25.00	DISCHG	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
26.00	DISCHG	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
27.00	DISCHG	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
28.00	DISCHG	1.06	1.06	1.06	1.05	1.05	1.05	1.05	1.05	1.05	1.05
29.00	DISCHG	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 1.05 CFS, 99.19 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.05 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.30	1.05	5420.04

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	385.87	(RUNOFF)
10.44	15.11	(RUNOFF)
11.60	13.90	(RUNOFF)
12.60	14.01	(RUNOFF)
14.10	14.09	(RUNOFF)
18.95	8.07	(RUNOFF)
20.63	7.24	(RUNOFF)
21.59	6.23	(RUNOFF)
23.53	5.99	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 1
PAGE .

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	385.87	5425.19
10.45	15.88	5420.56
11.60	14.68	5420.53
12.60	14.83	5420.53
14.10	14.95	5420.54
18.95	9.04	5420.36
20.63	8.23	5420.33
21.59	7.23	5420.29
23.53	7.02	5420.28

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.38	323.98	5306.51
10.56	15.84	5300.82
11.77	13.99	5300.75
12.78	14.15	5300.76
14.29	14.18	5300.76
19.06	9.03	5300.54
20.82	7.84	5300.47
21.77	7.11	5300.43
23.68	6.84	5300.41

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	888.27	(RUNOFF)
10.45	25.16	(RUNOFF)

11.56	23.68	(RUNOFF)
12.56	23.79	(RUNOFF)
14.06	23.88	(RUNOFF)
18.91	13.02	(RUNOFF)
20.58	12.15	(RUNOFF)
21.55	10.16	(RUNOFF)
23.49	9.85	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	1070.47	5315.13
10.46	40.96	5301.76
11.60	36.55	5301.60
12.60	36.77	5301.60
14.11	36.71	5301.60
18.95	22.06	5301.05
20.64	19.22	5300.95
21.59	17.07	5300.87
23.53	16.37	5300.84

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 58

TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 3.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	487.39	(RUNOFF)
10.45	19.43	(RUNOFF)
11.57	18.19	(RUNOFF)
12.57	18.46	(RUNOFF)
14.08	18.59	(RUNOFF)
18.92	10.47	(RUNOFF)
20.60	9.63	(RUNOFF)
21.57	8.17	(RUNOFF)
23.50	7.91	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
PAGE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	467.26	(RUNOFF)
10.46	18.80	(RUNOFF)
11.60	17.19	(RUNOFF)
12.60	17.35	(RUNOFF)
14.11	17.42	(RUNOFF)
18.95	10.04	(RUNOFF)
20.63	8.96	(RUNOFF)
21.60	7.74	(RUNOFF)
23.53	7.44	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	141.37	(RUNOFF)
10.46	6.63	(RUNOFF)
11.61	6.05	(RUNOFF)
12.61	6.12	(RUNOFF)
14.12	6.17	(RUNOFF)
18.95	3.59	(RUNOFF)
23.53	2.67	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	1092.02	5710.44
10.45	44.91	5701.27
11.59	41.39	5701.18
12.59	41.89	5701.20
14.10	42.14	5701.20
18.93	24.09	5700.75
20.62	21.77	5700.69
21.58	18.68	5700.62
23.52	18.01	5700.60

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 50 BY 91.2 CFS

OPERATION REACH CROSS SECTION 50

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS ;
PAGE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.53	758.14	5500.94
10.67	44.73	5491.73
11.90	37.95	5491.51
12.91	38.17	5491.52
14.43	37.57	5491.50
19.16	24.07	5491.06
20.98	19.38	5490.90
21.88	18.07	5490.86
23.79	16.93	5490.83

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	289.80	(RUNOFF)
10.37	10.03	(RUNOFF)
11.70	8.61	(RUNOFF)
12.70	8.54	(RUNOFF)
14.22	8.45	(RUNOFF)
18.86	5.14	(RUNOFF)
23.59	3.60	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	974.75	5503.41
10.49	54.65	5492.08
11.86	45.95	5491.77
12.87	46.13	5491.77
14.40	45.36	5491.75
18.97	29.17	5491.22
20.95	23.38	5491.04
21.85	21.79	5490.98
23.75	20.16	5490.93

OPERATION RUNOFF CROSS SECTION 52

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	2659.53	(RUNOFF)
10.37	55.85	(RUNOFF)
11.52	53.74	(RUNOFF)
12.52	53.88	(RUNOFF)
14.02	54.05	(RUNOFF)
18.87	28.32	(RUNOFF)
20.53	27.07	(RUNOFF)
21.51	22.25	(RUNOFF)
23.47	21.78	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	2959.33	5507.86
10.40	110.46	5491.65
11.56	94.71	5491.52
12.57	94.42	5491.51
14.09	91.79	5491.47
18.92	57.47	5490.92
20.61	45.91	5490.74
21.55	43.24	5490.70
23.50	40.66	5490.66

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 1951.0 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	2910.98	5490.33
10.50	110.45	5463.19
11.67	94.38	5462.92
12.68	94.05	5462.91
14.20	91.33	5462.82
19.03	57.47	5461.74
20.73	45.70	5461.38
21.66	43.19	5461.31
23.61	40.51	5461.24

OPERATION RUNOFF CROSS SECTION 38

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
PAGE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	196.52	(RUNOFF)
10.43	7.45	(RUNOFF)
11.61	6.75	(RUNOFF)
12.61	6.81	(RUNOFF)
14.12	6.82	(RUNOFF)
18.95	3.95	(RUNOFF)
23.54	2.90	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	3107.21	5492.25
10.47	117.91	5463.26
11.67	101.06	5463.11
12.67	100.78	5463.11
14.19	98.02	5463.04

18.98	61.41	5461.87
20.72	49.13	5461.48
21.65	46.21	5461.40
23.60	43.38	5461.32

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.87 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.70	3.87	5483.25

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.52 SQ.MI.
5.00	DISCHG	.00	.00	.00	.01	.15
6.00	DISCHG	.33	.58	1.17	1.93	2.15
7.00	DISCHG	2.24	2.31	2.42	2.59	2.65
8.00	DISCHG	2.68	2.71	2.76	2.83	2.86
9.00	DISCHG	2.88	2.89	2.90	2.96	2.98
10.00	DISCHG	3.00	3.01	3.02	3.08	3.10
11.00	DISCHG	3.11	3.12	3.12	3.17	3.19
12.00	DISCHG	3.20	3.20	3.21	3.26	3.28
13.00	DISCHG	3.28	3.29	3.30	3.33	3.35
14.00	DISCHG	3.36	3.36	3.37	3.42	3.43
15.00	DISCHG	3.44	3.44	3.45	3.48	3.49
16.00	DISCHG	3.50	3.50	3.51	3.54	3.55
17.00	DISCHG	3.55	3.56	3.57	3.60	3.61
18.00	DISCHG	3.61	3.62	3.62	3.65	3.67
19.00	DISCHG	3.67	3.68	3.69	3.71	3.72
20.00	DISCHG	3.72	3.72	3.73	3.74	3.75

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
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21.00	DISCHG	3.76	3.76	3.77	3.77	3.77	3.78	3.78	3.79	3.79	3.79
22.00	DISCHG	3.80	3.80	3.81	3.81	3.81	3.82	3.82	3.82	3.83	3.83
23.00	DISCHG	3.83	3.84	3.84	3.84	3.85	3.85	3.86	3.86	3.86	3.87
24.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
25.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
26.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.86	3.86	3.86	3.86
28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

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

0 *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 3.86 CFS, 99.51 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.87 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.10	3.87	5420.12

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	147.76	(RUNOFF)
10.43	5.35	(RUNOFF)
11.57	4.99	(RUNOFF)
12.57	5.06	(RUNOFF)
14.08	5.08	(RUNOFF)
18.91	2.84	(RUNOFF)
23.50	2.14	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	147.83	5422.75
10.46	8.34	5420.25
11.58	8.09	5420.24
12.58	8.25	5420.25
14.08	8.40	5420.25
18.96	6.49	5420.19
23.51	5.97	5420.18

OPERATION REACH CROSS SECTION 32

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	115.60	5362.52
10.59	8.31	5360.25
11.77	7.77	5360.23
12.77	7.90	5360.24
14.28	8.01	5360.24
19.08	6.47	5360.19
23.67	5.88	5360.18

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	307.23	(RUNOFF)
10.46	12.38	(RUNOFF)
11.61	11.27	(RUNOFF)
12.61	11.40	(RUNOFF)
14.11	11.44	(RUNOFF)
18.89	6.59	(RUNOFF)
20.64	5.87	(RUNOFF)
21.60	5.08	(RUNOFF)
23.53	4.87	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 32

[illegible]

OPERATION REACH CROSS SECTION 30

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
PAGE 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	358.22	5313.72
10.58	20.61	5310.61
11.81	18.29	5310.57
12.81	18.51	5310.57
14.33	18.59	5310.57
19.06	13.04	5310.46
20.87	11.54	5310.43
21.80	10.85	5310.42
23.70	10.53	5310.41

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	168.11	(RUNOFF)
10.44	7.25	(RUNOFF)
11.61	6.62	(RUNOFF)
12.61	6.70	(RUNOFF)
14.12	6.74	(RUNOFF)
18.94	3.90	(RUNOFF)
23.54	2.89	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	478.27	5314.38
10.48	27.83	5310.76
11.74	24.35	5310.69
12.74	24.64	5310.69
14.25	24.67	5310.69
18.97	16.94	5310.54
20.80	14.70	5310.49
21.72	13.76	5310.48
23.61	13.24	5310.46

OPERATION RUNOFF CROSS SECTION 34

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
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6.13	115.90	(RUNOFF)
7.47	10.13	(RUNOFF)
10.45	4.39	(RUNOFF)
11.54	4.21	(RUNOFF)
12.54	4.26	(RUNOFF)
14.04	4.32	(RUNOFF)
18.95	2.39	(RUNOFF)
23.48	1.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	541.62	5395.42
10.47	32.22	5390.74
11.68	28.04	5390.66
12.68	28.37	5390.67
14.20	28.38	5390.67
18.96	19.32	5390.49
20.74	16.61	5390.43
21.66	15.54	5390.41
23.57	15.00	5390.40

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.66	345.89	5317.26
10.49	32.18	5311.13
11.74	27.88	5310.98
12.74	28.19	5310.99
14.26	28.16	5310.99
18.98	19.31	5310.68
20.81	16.53	5310.58
21.72	15.51	5310.54
23.61	14.88	5310.52

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.59 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.04	1.52	13.58	57.53
6.00	DISCHG	95.10	158.77	215.97	273.07	312.80	336.87	344.77	345.40	339.84	327.91
7.00	DISCHG	305.12	280.64	255.03	224.84	198.39	175.66	156.41	138.08	114.84	98.78
8.00	DISCHG	87.51	79.37	73.08	67.64	62.51	57.56	46.08	41.06	38.13	36.03
9.00	DISCHG	34.54	33.51	32.82	32.38	32.11	31.96	31.88	31.85	31.85	31.88
10.00	DISCHG	31.92	31.97	32.02	32.08	32.13	32.18	32.11	31.55	30.27	28.44
11.00	DISCHG	26.38	24.51	23.39	23.35	24.21	25.59	27.00	27.82	27.68	26.71
12.00	DISCHG	25.28	23.87	23.07	23.25	24.28	25.77	27.25	28.11	28.00	27.03
13.00	DISCHG	25.58	24.02	22.58	21.40	20.50	19.84	19.52	19.84	21.00	22.82

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TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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JOB 1 PASS 2
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14.00	DISCHG	24.91	26.83	28.00	28.08	27.23	25.85	24.31	22.88	21.71	20.81
15.00	DISCHG	20.16	19.70	19.38	19.17	19.03	18.94	18.89	18.86	18.85	18.85
16.00	DISCHG	18.86	18.87	18.88	18.89	18.91	18.92	18.94	18.96	18.97	18.99
17.00	DISCHG	19.00	19.02	19.03	19.05	19.06	19.08	19.09	19.11	19.13	19.14
18.00	DISCHG	19.16	19.17	19.19	19.20	19.22	19.23	19.25	19.26	19.28	19.29

19.00	DISCHG	19.31	19.27	19.02	18.45	17.66	16.77	15.89	15.02	14.14	13.29
20.00	DISCHG	12.52	11.95	11.82	12.29	13.22	14.37	15.48	16.26	16.52	16.35
21.00	DISCHG	15.92	15.41	15.02	14.87	14.94	15.14	15.38	15.50	15.44	15.20
22.00	DISCHG	14.88	14.54	14.23	13.97	13.78	13.64	13.55	13.49	13.44	13.42
23.00	DISCHG	13.41	13.43	13.54	13.81	14.18	14.58	14.87	14.71	13.88	12.54
24.00	DISCHG	10.96	9.39	8.00	6.87	6.00	5.35	4.87	4.54	4.31	4.16
25.00	DISCHG	4.05	3.98	3.93	3.91	3.89	3.88	3.88	3.87	3.87	3.87
26.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.86
28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.02	314.02	5252.46
10.60	32.15	5250.48
11.94	26.82	5250.41
12.97	26.87	5250.41
14.53	26.30	5250.40
19.14	19.27	5250.32
21.90	15.34	5250.27
23.80	14.39	5250.25

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	57.45	(RUNOFF)
14.39	3.69	(RUNOFF)
18.97	2.50	(RUNOFF)
23.66	1.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.94	350.19	5252.63
11.93	30.56	5250.46
12.95	30.59	5250.46
14.51	29.92	5250.45
19.08	21.77	5250.35
21.88	17.19	5250.29
23.78	16.05	5250.28

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.02	347.90	5284.81
12.02	30.37	5282.00

13.05	30.33	5282.00
14.63	29.54	5281.97
19.16	21.76	5281.45
21.97	17.15	5281.14
23.86	15.92	5281.06

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.78 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.06	.57	3.25
6.00	DISCHG	12.80	33.02	70.22	116.16	167.45	221.52	268.95	304.42	328.43	342.32
7.00	DISCHG	347.71	345.65	337.12	323.58	305.72	284.58	261.98	239.40	217.56	195.97
8.00	DISCHG	175.90	157.23	140.10	125.21	112.51	101.62	92.17	83.14	74.26	66.34
9.00	DISCHG	59.68	54.24	49.90	46.50	43.89	41.90	40.40	39.29	38.47	37.88
10.00	DISCHG	37.47	37.18	36.98	36.86	36.79	36.76	36.74	36.72	36.60	36.23
11.00	DISCHG	35.50	34.39	32.97	31.46	30.15	29.41	29.07	29.17	29.57	30.04
12.00	DISCHG	30.36	30.22	29.74	29.09	28.44	28.04	28.05	28.46	29.12	29.79
13.00	DISCHG	30.27	30.27	29.81	29.09	28.12	27.05	26.00	25.06	24.34	23.98
14.00	DISCHG	24.10	24.73	25.78	27.05	28.25	29.13	29.52	29.41	28.87	28.05
15.00	DISCHG	27.10	26.13	25.22	24.41	23.72	23.16	22.70	22.34	22.07	21.86
16.00	DISCHG	21.70	21.59	21.51	21.46	21.43	21.41	21.40	21.39	21.40	21.40
17.00	DISCHG	21.41	21.42	21.44	21.45	21.47	21.48	21.50	21.52	21.53	21.55
18.00	DISCHG	21.57	21.58	21.60	21.62	21.64	21.65	21.67	21.69	21.70	21.72
19.00	DISCHG	21.74	21.75	21.75	21.72	21.58	21.30	20.86	20.26	19.55	18.76
20.00	DISCHG	17.90	17.03	16.18	15.43	14.89	14.65	14.76	15.16	15.75	16.39
21.00	DISCHG	16.93	17.28	17.41	17.38	17.25	17.12	17.04	17.03	17.08	17.14
22.00	DISCHG	17.15	17.09	16.95	16.75	16.51	16.26	16.02	15.80	15.61	15.45
23.00	DISCHG	15.33	15.23	15.16	15.12	15.15	15.25	15.43	15.66	15.86	15.90
24.00	DISCHG	15.65	15.07	14.18	13.06	11.83	10.58	9.40	8.34	7.43	6.66
25.00	DISCHG	6.03	5.52	5.12	4.81	4.57	4.39	4.25	4.15	4.07	4.01
26.00	DISCHG	3.97	3.94	3.92	3.91	3.89	3.89	3.88	3.88	3.87	3.87
27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

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OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	171.19	(RUNOFF)
10.44	7.78	(RUNOFF)
11.62	7.06	(RUNOFF)
12.62	7.13	(RUNOFF)
14.12	7.17	(RUNOFF)
18.90	4.20	(RUNOFF)
23.55	3.10	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.44	135.23	5250.90
10.57	7.77	5250.08
11.81	6.65	5250.07

12.82	6.70	5250.07
14.33	6.66	5250.07
19.05	4.19	5250.04
23.70	2.97	5250.03

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.85	74.32	5327.86
10.62	7.75	5320.86
11.92	6.49	5320.72
12.93	6.53	5320.73
14.46	6.46	5320.72
19.08	4.19	5320.47
23.78	2.91	5320.32

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .30 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.21	1.73
6.00	DISCHG	7.24	19.67	33.99	48.70	57.67	66.44	71.42	73.33	74.22	74.24
7.00	DISCHG	73.54	72.31	70.70	67.31	62.85	58.50	54.34	50.47	46.91	41.25
8.00	DISCHG	33.75	28.43	24.62	21.81	19.61	17.57	14.82	12.94	11.54	10.48
9.00	DISCHG	9.67	9.08	8.64	8.33	8.11	7.96	7.86	7.79	7.75	7.73
10.00	DISCHG	7.71	7.71	7.72	7.72	7.73	7.74	7.75	7.75	7.69	7.51
11.00	DISCHG	7.18	6.72	6.23	5.81	5.57	5.56	5.76	6.06	6.34	6.49
12.00	DISCHG	6.43	6.19	5.86	5.56	5.42	5.47	5.72	6.05	6.36	6.52
13.00	DISCHG	6.48	6.25	5.91	5.53	5.19	4.90	4.66	4.50	4.44	4.55
14.00	DISCHG	4.83	5.27	5.76	6.19	6.43	6.44	6.25	5.93	5.57	5.23
15.00	DISCHG	4.95	4.72	4.54	4.41	4.32	4.25	4.20	4.17	4.15	4.13

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TR20 XEQ 03-23-99 10:37	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS
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16.00	DISCHG	4.13	4.12	4.12	4.12	4.12	4.12	4.12	4.13	4.13	4.13
17.00	DISCHG	4.14	4.14	4.14	4.14	4.15	4.15	4.15	4.15	4.16	4.16
18.00	DISCHG	4.16	4.17	4.17	4.17	4.17	4.18	4.18	4.18	4.18	4.19
19.00	DISCHG	4.19	4.19	4.19	4.16	4.08	3.93	3.74	3.51	3.28	3.06
20.00	DISCHG	2.83	2.61	2.42	2.29	2.27	2.38	2.60	2.87	3.12	3.29
21.00	DISCHG	3.35	3.32	3.23	3.12	3.04	3.01	3.02	3.07	3.11	3.13
22.00	DISCHG	3.11	3.05	2.97	2.89	2.81	2.75	2.70	2.66	2.63	2.61
23.00	DISCHG	2.59	2.58	2.58	2.59	2.62	2.69	2.78	2.87	2.91	2.84
24.00	DISCHG	2.62	2.29	1.90	1.52	1.17	.88	.65	.47	.33	.23
25.00	DISCHG	.16	.11	.07	.05	.03	.02	.01	.00		

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	617.12	(RUNOFF)
10.43	23.24	(RUNOFF)
11.61	21.19	(RUNOFF)
12.61	21.34	(RUNOFF)
14.11	21.42	(RUNOFF)
18.95	12.31	(RUNOFF)
20.64	10.95	(RUNOFF)
21.60	9.47	(RUNOFF)

23.53 9.10 (RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	169.85	(RUNOFF)
10.42	8.81	(RUNOFF)
11.72	7.54	(RUNOFF)
12.72	7.61	(RUNOFF)
14.24	7.49	(RUNOFF)
18.96	4.71	(RUNOFF)
23.59	3.29	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	152.38	5492.97
10.55	8.81	5490.35
11.89	7.34	5490.29
12.90	7.39	5490.30
14.43	7.24	5490.29
19.07	4.71	5490.19
23.75	3.22	5490.13

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OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	364.84	(RUNOFF)
7.45	28.35	(RUNOFF)
10.43	11.97	(RUNOFF)
11.55	11.45	(RUNOFF)
12.55	11.58	(RUNOFF)
14.05	11.65	(RUNOFF)
18.95	6.38	(RUNOFF)
20.57	5.99	(RUNOFF)
21.55	5.00	(RUNOFF)
23.49	4.88	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	413.93	5494.80
10.45	20.81	5490.64
11.58	18.02	5490.58
12.58	18.06	5490.58
14.10	17.64	5490.57
18.95	11.08	5490.42
20.62	9.00	5490.36

21.56 8.39 5490.34
23.51 7.93 5490.32

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .91 CFS.

PEAK TIME(HRS) 24.50
PEAK DISCHARGE(CFS) .91
PEAK ELEVATION(FEET) 5503.45

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.72 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.02
6.00	DISCHG	.06	.12	.18	.24	.46
7.00	DISCHG	.48	.49	.51	.52	.58
8.00	DISCHG	.58	.59	.60	.60	.63
9.00	DISCHG	.63	.64	.64	.64	.66
10.00	DISCHG	.67	.67	.67	.68	.69
11.00	DISCHG	.70	.70	.70	.71	.72
12.00	DISCHG	.72	.72	.73	.73	.74
13.00	DISCHG	.75	.75	.75	.75	.76
14.00	DISCHG	.77	.77	.77	.78	.79

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TR20 XEQ 03-23-99 10:37
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15.00	DISCHG	.79	.79	.79	.79	.80	.80	.80	.80	.80
16.00	DISCHG	.80	.81	.81	.81	.81	.81	.82	.82	.82
17.00	DISCHG	.82	.82	.82	.83	.83	.83	.83	.83	.84
18.00	DISCHG	.84	.84	.84	.84	.84	.85	.85	.85	.85
19.00	DISCHG	.85	.85	.86	.86	.86	.86	.86	.86	.86
20.00	DISCHG	.87	.87	.87	.87	.87	.87	.87	.87	.88
21.00	DISCHG	.88	.88	.88	.88	.88	.88	.88	.89	.89
22.00	DISCHG	.89	.89	.89	.89	.89	.89	.89	.90	.90
23.00	DISCHG	.90	.90	.90	.90	.90	.90	.90	.91	.91
24.00	DISCHG	.91	.91	.91	.91	.91	.91	.91	.91	.91
25.00	DISCHG	.91	.91	.91	.91	.91	.91	.91	.91	.91
26.00	DISCHG	.91	.91	.91	.91	.91	.91	.90	.90	.90
27.00	DISCHG	.90	.90	.90	.90	.90	.90	.90	.90	.90
28.00	DISCHG	.90	.90	.90	.90	.90	.90	.90	.90	.90
29.00	DISCHG	.90	.90	.90	.90	.90	.90	.90	.90	.90

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .90 CFS, 99.20 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .90 CFS.

PEAK TIME(HRS) 25.40
PEAK DISCHARGE(CFS) .90
PEAK ELEVATION(FEET) 5420.04

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	321.38	(RUNOFF)
10.45	13.23	(RUNOFF)
11.60	12.18	(RUNOFF)
12.60	12.29	(RUNOFF)
14.10	12.37	(RUNOFF)
18.95	7.11	(RUNOFF)
20.63	6.38	(RUNOFF)
21.59	5.49	(RUNOFF)
23.53	5.29	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
PAGE 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	321.38	5424.67
10.45	13.87	5420.51
11.60	12.84	5420.48
12.60	12.98	5420.48
14.10	13.10	5420.49
18.95	7.93	5420.32
20.63	7.23	5420.29
21.59	6.35	5420.25
23.53	6.17	5420.25

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.39	266.05	5305.89
10.56	13.83	5300.74
11.78	12.20	5300.68
12.78	12.35	5300.69
14.29	12.38	5300.69
19.06	7.92	5300.48
20.83	6.86	5300.41
21.77	6.23	5300.37
23.68	6.00	5300.36

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	768.20	(RUNOFF)
10.45	22.47	(RUNOFF)
11.56	21.17	(RUNOFF)
12.56	21.28	(RUNOFF)
14.06	21.37	(RUNOFF)
18.91	11.68	(RUNOFF)
20.58	10.90	(RUNOFF)
21.55	9.12	(RUNOFF)
23.49	8.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 2
PAGE 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	911.58	5313.26
10.46	36.27	5301.59
11.60	32.37	5301.44
12.60	32.59	5301.45
14.11	32.54	5301.45
18.95	19.61	5300.96
20.64	17.06	5300.86
21.59	15.17	5300.79
23.53	14.55	5300.77

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 58

TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 3.10 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 3 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	362.17	(RUNOFF)
10.45	15.76	(RUNOFF)
11.57	14.75	(RUNOFF)
12.57	14.99	(RUNOFF)
14.08	15.13	(RUNOFF)
18.93	8.57	(RUNOFF)
20.60	7.89	(RUNOFF)
21.57	6.69	(RUNOFF)
23.50	6.49	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
PAGE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	353.30	(RUNOFF)
10.46	15.37	(RUNOFF)
11.60	14.08	(RUNOFF)
12.60	14.23	(RUNOFF)
14.11	14.32	(RUNOFF)
18.95	8.29	(RUNOFF)
20.63	7.41	(RUNOFF)
21.60	6.40	(RUNOFF)
23.53	6.16	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	102.69	(RUNOFF)
10.46	5.32	(RUNOFF)
11.61	4.86	(RUNOFF)
12.61	4.93	(RUNOFF)
14.12	4.98	(RUNOFF)
18.95	2.92	(RUNOFF)
23.53	2.17	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	815.19	5708.22
10.46	36.45	5701.06
11.59	33.66	5700.99
12.59	34.12	5701.00
14.10	34.39	5701.01
18.95	19.76	5700.64
20.62	17.88	5700.60
21.58	15.35	5700.53
23.52	14.82	5700.52

OPERATION REACH CROSS SECTION 50

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
PAGE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	545.32	5498.52
10.67	36.29	5491.45
11.90	30.74	5491.27
12.91	30.92	5491.28
14.44	30.41	5491.26
19.16	19.73	5490.92

20.99	15.79	5490.79
21.88	14.82	5490.76
23.80	13.87	5490.73

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	238.87	(RUNOFF)
10.38	8.63	(RUNOFF)
11.70	7.42	(RUNOFF)
12.70	7.36	(RUNOFF)
14.22	7.29	(RUNOFF)
18.87	4.44	(RUNOFF)
23.59	3.11	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	721.43	5500.52
10.49	44.82	5491.73
11.86	37.62	5491.50
12.87	37.76	5491.50
14.40	37.11	5491.48
18.98	24.14	5491.06
20.95	19.24	5490.90
21.85	18.04	5490.86
23.74	16.66	5490.82

OPERATION RUNOFF CROSS SECTION 52

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
PAGE 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	2256.96	(RUNOFF)
10.37	48.60	(RUNOFF)
11.52	46.79	(RUNOFF)
12.52	46.93	(RUNOFF)
14.02	47.10	(RUNOFF)
18.87	24.71	(RUNOFF)
20.53	23.63	(RUNOFF)
21.51	19.42	(RUNOFF)
23.47	19.02	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	2479.59	5505.08
10.40	93.39	5491.49
11.56	80.59	5491.29
12.57	80.32	5491.29

14.08	78.10	5491.25
18.93	48.83	5490.78
20.61	39.20	5490.64
21.55	36.78	5490.60
23.49	34.67	5490.57

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 1471.3 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	2428.59	5485.60
10.50	93.38	5462.89
11.67	80.26	5462.47
12.68	79.95	5462.46
14.19	77.64	5462.38
19.05	48.83	5461.47
20.72	38.99	5461.20
21.66	36.80	5461.14
23.60	34.52	5461.07

OPERATION RUNOFF CROSS SECTION 38

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
 PAGE 37

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	151.98	(RUNOFF)
10.44	6.16	(RUNOFF)
11.62	5.59	(RUNOFF)
12.61	5.66	(RUNOFF)
14.12	5.67	(RUNOFF)
18.95	3.29	(RUNOFF)
23.54	2.42	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	2580.08	5487.08
10.47	99.55	5463.09
11.67	85.81	5462.65
12.67	85.54	5462.64
14.19	83.21	5462.56
18.98	52.12	5461.57
20.71	41.86	5461.28
21.65	39.32	5461.21
23.60	36.92	5461.14

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.18 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
24.80 3.18 5479.09

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.52 SQ.MI.
5.00	DISCHG	.00	.00	.00	.01	.03
6.00	DISCHG	.25	.46	.71	.95	1.16
7.00	DISCHG	1.80	1.86	1.91	1.95	1.99
8.00	DISCHG	2.17	2.19	2.21	2.23	2.25
9.00	DISCHG	2.33	2.34	2.36	2.37	2.38
10.00	DISCHG	2.44	2.45	2.46	2.47	2.48
11.00	DISCHG	2.53	2.54	2.54	2.55	2.56
12.00	DISCHG	2.61	2.61	2.62	2.63	2.63
13.00	DISCHG	2.68	2.69	2.69	2.70	2.70
14.00	DISCHG	2.74	2.75	2.76	2.76	2.77
15.00	DISCHG	2.81	2.81	2.82	2.83	2.83
16.00	DISCHG	2.86	2.87	2.87	2.88	2.88
17.00	DISCHG	2.91	2.91	2.92	2.92	2.93
18.00	DISCHG	2.96	2.96	2.97	2.97	2.98
19.00	DISCHG	3.01	3.01	3.02	3.02	3.03
20.00	DISCHG	3.05	3.05	3.05	3.06	3.06

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
PAGE 38

21.00	DISCHG	3.08	3.09	3.09	3.09	3.10	3.10	3.10	3.11	3.11	3.11
22.00	DISCHG	3.12	3.12	3.12	3.13	3.13	3.13	3.14	3.14	3.14	3.14
23.00	DISCHG	3.15	3.15	3.15	3.16	3.16	3.16	3.17	3.17	3.17	3.17
24.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
25.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
26.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
27.00	DISCHG	3.18	3.18	3.18	3.18	3.17	3.17	3.17	3.17	3.17	3.17
28.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
29.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17

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

0 *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 3.17 CFS, 99.51 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.18 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
25.20 3.18 5420.10

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	113.06	(RUNOFF)
10.44	4.39	(RUNOFF)
11.57	4.11	(RUNOFF)
12.57	4.17	(RUNOFF)
14.08	4.19	(RUNOFF)

18.92	2.36	(RUNOFF)
23.50	1.78	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	113.07	5422.49
7.55	11.93	5420.34
10.46	6.81	5420.20
11.58	6.62	5420.20
12.58	6.76	5420.20
14.08	6.89	5420.21
18.96	5.33	5420.16
23.51	4.92	5420.15

OPERATION REACH CROSS SECTION 32

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.38	85.89	5362.06
10.59	6.78	5360.20
12.77	6.45	5360.19
14.29	6.55	5360.20
19.09	5.32	5360.16
23.67	4.83	5360.15

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	233.22	(RUNOFF)
10.46	10.14	(RUNOFF)
11.61	9.25	(RUNOFF)
12.61	9.37	(RUNOFF)
14.11	9.42	(RUNOFF)
18.89	5.45	(RUNOFF)
20.64	4.86	(RUNOFF)
23.53	4.04	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	302.28	5363.92
10.47	16.90	5360.46
11.64	15.38	5360.42
12.64	15.61	5360.43
14.15	15.74	5360.43
18.95	10.76	5360.32
20.69	9.76	5360.29
21.63	9.03	5360.27

23.56

8.84

5360.27

OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	302.42	5362.82
10.47	16.90	5360.19
11.65	15.38	5360.17
12.64	15.60	5360.17
14.16	15.74	5360.17
18.96	10.76	5360.12
20.69	9.76	5360.11
21.64	9.03	5360.10
23.56	8.84	5360.10

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
PAGE 40

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 4.14 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00	.00 .00 .00 .00	2.74 17.09 61.08
6.00 DISCHG	140.47 228.07 292.30 299.42	258.27 201.95 152.72	120.41 94.29 75.98
7.00 DISCHG	61.84 52.98 46.60 42.72	39.90 38.21 36.85	35.82 34.54 33.30
8.00 DISCHG	32.12 31.06 29.42 27.00	24.23 21.83 20.00	18.79 17.95 17.40
9.00 DISCHG	17.05 16.83 16.70 16.63	16.60 16.59 16.60	16.63 16.65 16.69
10.00 DISCHG	16.72 16.76 16.79 16.82	16.86 16.89 16.76	16.21 15.11 13.78
11.00 DISCHG	12.59 11.87 11.84 12.55	13.64 14.66 15.31	15.28 14.57 13.49
12.00 DISCHG	12.49 11.85 11.92 12.67	13.77 14.84 15.53	15.49 14.77 13.71
13.00 DISCHG	12.65 11.85 11.30 10.92	10.66 10.50 10.57	11.11 12.21 13.58
14.00 DISCHG	14.85 15.62 15.67 14.98	13.90 12.85 12.05	11.51 11.12 10.87
15.00 DISCHG	10.70 10.59 10.52 10.48	10.45 10.44 10.44	10.44 10.45 10.46
16.00 DISCHG	10.47 10.48 10.48 10.50	10.51 10.52 10.53	10.54 10.55 10.56
17.00 DISCHG	10.57 10.58 10.59 10.60	10.61 10.62 10.63	10.64 10.65 10.66
18.00 DISCHG	10.67 10.68 10.68 10.69	10.70 10.71 10.72	10.73 10.74 10.75
19.00 DISCHG	10.76 10.70 10.45 9.98	9.42 8.91 8.48	8.09 7.67 7.26
20.00 DISCHG	6.93 6.79 7.01 7.60	8.39 9.13 9.62	9.76 9.55 9.16
21.00 DISCHG	8.76 8.50 8.41 8.51	8.70 8.90 9.02	9.00 8.84 8.60
22.00 DISCHG	8.38 8.21 8.09 8.01	7.96 7.93 7.91	7.89 7.89 7.88
23.00 DISCHG	7.89 7.92 8.04 8.26	8.53 8.76 8.81	8.44 7.62 6.58
24.00 DISCHG	5.60 4.87 4.35 3.98	3.71 3.53 3.40	3.32 3.27 3.23
25.00 DISCHG	3.21 3.19 3.18 3.18	3.18 3.18 3.18	3.18 3.18 3.18
26.00 DISCHG	3.18 3.18 3.18 3.18	3.18 3.18 3.18	3.18 3.18 3.18
27.00 DISCHG	3.18 3.18 3.18 3.18	3.18 3.18 3.17	3.18 3.17 3.17
28.00 DISCHG	3.17 3.17 3.17 3.17	3.17 3.17 3.17	3.17 3.17 3.17
29.00 DISCHG	3.17 3.17 3.17 3.17	3.17 3.17 3.17	3.17 3.17 3.17

OPERATION REACH CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	265.40	5313.21
10.69	16.86	5310.54
11.92	14.93	5310.50
12.92	15.12	5310.50
14.44	15.19	5310.50

19.17	10.75	5310.42
21.90	8.94	5310.36
23.80	8.67	5310.35

OPERATION RUNOFF CROSS SECTION 30
1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
PAGE 41

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	124.88	(RUNOFF)
10.45	5.88	(RUNOFF)
11.61	5.38	(RUNOFF)
12.61	5.45	(RUNOFF)
14.12	5.49	(RUNOFF)
18.95	3.20	(RUNOFF)
23.54	2.38	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	326.50	5313.55
10.49	22.66	5310.65
11.81	19.36	5310.59
12.82	19.59	5310.59
14.34	19.60	5310.59
18.97	13.93	5310.48
21.78	11.23	5310.42
23.64	10.69	5310.41

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	84.26	(RUNOFF)
7.48	8.01	(RUNOFF)
10.45	3.51	(RUNOFF)
11.54	3.38	(RUNOFF)
12.54	3.42	(RUNOFF)
14.04	3.48	(RUNOFF)
18.95	1.93	(RUNOFF)
23.48	1.50	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	352.63	5394.07
10.47	26.17	5390.62
11.71	22.05	5390.54
12.72	22.30	5390.55
14.25	22.19	5390.54
18.96	15.86	5390.42

21.67 12.64 5390.35
23.57 12.10 5390.34

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS
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OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.73	267.83	5316.11
10.50	26.14	5310.92
11.77	21.96	5310.77
12.78	22.21	5310.78
14.32	22.13	5310.78
18.98	15.85	5310.56
21.73	12.62	5310.44
23.61	12.02	5310.42

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 4.59 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00 .01	.57 6.08 29.77	
6.00 DISCHG	67.61 105.01 151.54 183.15 214.38 241.57 260.74	267.42 265.90 256.72	
7.00 DISCHG	239.69 219.73 198.90 178.61 159.78 142.81 116.80	98.32 85.08 75.50	
8.00 DISCHG	68.50 63.25 58.98 52.13 45.38 41.90 38.71	35.71 33.07 30.93	
9.00 DISCHG	29.31 28.12 27.29 26.73 26.36 26.12 25.99	25.92 25.89 25.90	
10.00 DISCHG	25.92 25.96 26.00 26.05 26.10 26.14 26.09	25.69 24.83 23.68	
11.00 DISCHG	22.40 21.12 20.19 19.85 20.01 20.56 21.30	21.85 21.95 21.62	
12.00 DISCHG	20.99 20.21 19.66 19.59 19.95 20.64 21.47	22.07 22.20 21.90	
13.00 DISCHG	21.25 20.37 19.35 18.34 17.46 16.78 16.37	16.47 17.15 18.23	
14.00 DISCHG	19.50 20.78 21.74 22.12 21.96 21.43 20.60	19.60 18.61 17.75	
15.00 DISCHG	17.06 16.55 16.17 15.91 15.74 15.62 15.54	15.49 15.47 15.46	
16.00 DISCHG	15.45 15.46 15.47 15.48 15.49 15.51 15.52	15.53 15.55 15.56	
17.00 DISCHG	15.58 15.59 15.60 15.62 15.63 15.64 15.66	15.67 15.69 15.70	
18.00 DISCHG	15.71 15.73 15.74 15.76 15.77 15.78 15.80	15.81 15.83 15.84	
19.00 DISCHG	15.85 15.82 15.64 15.25 14.74 14.17 13.55	12.86 12.12 11.41	
20.00 DISCHG	10.77 10.28 10.09 10.29 10.76 11.40 12.11	12.70 13.06 13.17	
21.00 DISCHG	13.09 12.88 12.64 12.48 12.43 12.46 12.55	12.62 12.60 12.50	
22.00 DISCHG	12.34 12.13 11.90 11.68 11.50 11.35 11.24	11.16 11.11 11.07	
23.00 DISCHG	11.05 11.06 11.15 11.33 11.56 11.83 12.02	11.91 11.40 10.61	
24.00 DISCHG	9.66 8.60 7.51 6.49 5.62 4.94 4.42	4.04 3.76 3.57	
25.00 DISCHG	3.44 3.34 3.28 3.24 3.21 3.20 3.19	3.18 3.18 3.18	
26.00 DISCHG	3.18 3.18 3.18 3.18 3.18 3.18 3.18	3.18 3.18 3.18	
27.00 DISCHG	3.18 3.18 3.18 3.18 3.18 3.18 3.18	3.18 3.17 3.17	
28.00 DISCHG	3.17 3.17 3.17 3.17 3.17 3.17 3.17	3.17 3.17 3.17	
29.00 DISCHG	3.17 3.17 3.17 3.17 3.17 3.17 3.17	3.17 3.17 3.17	

OPERATION REACH CROSS SECTION 28

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.07	236.67	5252.11
11.97	21.56	5250.34
13.02	21.52	5250.34
14.61	20.97	5250.34
19.15	15.82	5250.27
21.89	12.57	5250.23
23.80	11.69	5250.22

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	41.03	(RUNOFF)
23.66	1.37	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.01	261.15	5252.23
11.93	24.54	5250.38
12.98	24.47	5250.38
14.58	23.81	5250.37
19.09	17.83	5250.30
21.86	14.07	5250.25
23.78	13.04	5250.24

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.09	259.20	5284.36
12.01	24.45	5281.63
13.09	24.32	5281.62
14.69	23.59	5281.57
19.16	17.83	5281.19
21.93	14.06	5280.94
23.86	12.95	5280.86

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.78 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.02	.25	1.60
6.00	DISCHG	6.67	18.91	41.59	74.60	110.23	145.14	177.56	207.85	231.83	247.86
7.00	DISCHG	256.77	259.18	255.83	247.78	236.13	222.08	206.73	189.78	172.83	155.22
8.00	DISCHG	138.49	123.54	110.60	99.59	89.94	81.00	72.85	65.71	59.50	54.10
9.00	DISCHG	49.40	45.38	42.00	39.21	36.95	35.16	33.76	32.67	31.84	31.22
10.00	DISCHG	30.76	30.43	30.20	30.04	29.95	29.89	29.85	29.82	29.73	29.50
11.00	DISCHG	29.06	28.39	27.53	26.56	25.64	24.89	24.40	24.20	24.23	24.36

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TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
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12.00	DISCHG	24.45	24.40	24.18	23.83	23.47	23.21	23.15	23.30	23.61	23.97
13.00	DISCHG	24.24	24.32	24.17	23.80	23.23	22.53	21.78	21.05	20.45	20.08

14.00	DISCHG	20.03	20.31	20.88	21.63	22.41	23.06	23.47	23.59	23.44	23.04
15.00	DISCHG	22.47	21.81	21.14	20.49	19.90	19.39	18.96	18.60	18.32	18.10
16.00	DISCHG	17.93	17.80	17.70	17.63	17.58	17.55	17.53	17.52	17.52	17.52
17.00	DISCHG	17.52	17.53	17.54	17.55	17.56	17.58	17.59	17.61	17.62	17.64
18.00	DISCHG	17.65	17.67	17.68	17.70	17.71	17.73	17.75	17.76	17.78	17.79
19.00	DISCHG	17.81	17.82	17.82	17.80	17.70	17.51	17.22	16.82	16.33	15.77
20.00	DISCHG	15.13	14.46	13.80	13.19	12.73	12.45	12.39	12.54	12.83	13.20
21.00	DISCHG	13.56	13.84	14.03	14.11	14.11	14.08	14.04	14.03	14.04	14.05
22.00	DISCHG	14.05	14.01	13.93	13.81	13.66	13.48	13.30	13.13	12.97	12.82
23.00	DISCHG	12.71	12.61	12.53	12.49	12.49	12.55	12.66	12.80	12.92	12.94
24.00	DISCHG	12.79	12.43	11.88	11.15	10.30	9.39	8.47	7.59	6.80	6.10
25.00	DISCHG	5.51	5.01	4.60	4.27	4.01	3.81	3.65	3.53	3.44	3.37
26.00	DISCHG	3.32	3.28	3.25	3.23	3.21	3.20	3.20	3.19	3.19	3.18
27.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
28.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
29.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	126.09	(RUNOFF)
10.45	6.29	(RUNOFF)
11.62	5.71	(RUNOFF)
12.62	5.79	(RUNOFF)
14.13	5.83	(RUNOFF)
18.91	3.43	(RUNOFF)
23.55	2.54	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	95.17	5250.76
10.57	6.27	5250.06
11.82	5.35	5250.05
12.83	5.39	5250.05
14.35	5.35	5250.05
19.06	3.43	5250.03
23.70	2.42	5250.02

OPERATION RESVOR STRUCTURE 18

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TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	61.60	5326.16
10.63	6.26	5320.70
12.94	5.26	5320.58
14.47	5.20	5320.58
19.09	3.42	5320.38
23.79	2.37	5320.26

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .30 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.08	.81
6.00	DISCHG	3.82	12.11	23.70	37.35	47.91	53.32	57.75	60.52	61.57	61.17
7.00	DISCHG	59.65	57.30	54.43	51.30	48.08	44.76	36.39	30.28	25.81	22.51
8.00	DISCHG	20.04	18.15	15.73	14.21	13.13	12.15	11.16	10.20	9.31	8.55
9.00	DISCHG	7.93	7.45	7.08	6.81	6.61	6.47	6.37	6.31	6.27	6.24
10.00	DISCHG	6.23	6.23	6.23	6.23	6.24	6.25	6.26	6.26	6.21	6.08
11.00	DISCHG	5.83	5.49	5.11	4.78	4.57	4.54	4.67	4.89	5.10	5.22
12.00	DISCHG	5.19	5.02	4.78	4.55	4.42	4.45	4.63	4.88	5.12	5.25
13.00	DISCHG	5.23	5.07	4.82	4.53	4.26	4.03	3.84	3.70	3.64	3.71
14.00	DISCHG	3.91	4.24	4.62	4.95	5.16	5.19	5.07	4.84	4.57	4.31
15.00	DISCHG	4.08	3.89	3.74	3.63	3.54	3.48	3.44	3.41	3.39	3.37
16.00	DISCHG	3.37	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.37
17.00	DISCHG	3.37	3.37	3.37	3.38	3.38	3.38	3.39	3.39	3.39	3.39
18.00	DISCHG	3.40	3.40	3.40	3.40	3.41	3.41	3.41	3.41	3.42	3.42
19.00	DISCHG	3.42	3.42	3.42	3.40	3.34	3.23	3.08	2.90	2.72	2.54
20.00	DISCHG	2.36	2.18	2.02	1.91	1.88	1.96	2.12	2.32	2.51	2.65
21.00	DISCHG	2.71	2.70	2.64	2.56	2.50	2.47	2.48	2.51	2.54	2.56
22.00	DISCHG	2.54	2.50	2.44	2.37	2.31	2.26	2.22	2.19	2.16	2.14
23.00	DISCHG	2.13	2.12	2.12	2.12	2.15	2.20	2.27	2.34	2.37	2.32
24.00	DISCHG	2.16	1.91	1.61	1.31	1.03	.79	.59	.43	.32	.23
25.00	DISCHG	.16	.11	.08	.05	.03	.02	.01	.01	.00	

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	477.35	(RUNOFF)
10.44	19.23	(RUNOFF)
11.61	17.57	(RUNOFF)
12.61	17.72	(RUNOFF)
14.11	17.81	(RUNOFF)
18.95	10.28	(RUNOFF)
20.64	9.15	(RUNOFF)
21.60	7.92	(RUNOFF)
23.53	7.61	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	128.19	(RUNOFF)
10.43	7.22	(RUNOFF)
11.72	6.19	(RUNOFF)
12.72	6.26	(RUNOFF)
14.24	6.17	(RUNOFF)
18.96	3.90	(RUNOFF)
23.59	2.73	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	113.13	5492.69
10.56	7.22	5490.29
12.90	6.05	5490.24
14.43	5.94	5490.24
19.07	3.89	5490.16
23.75	2.67	5490.11

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	280.18	(RUNOFF)
7.46	23.11	(RUNOFF)
10.44	9.84	(RUNOFF)
11.55	9.43	(RUNOFF)
12.55	9.55	(RUNOFF)
14.05	9.63	(RUNOFF)
18.95	5.29	(RUNOFF)
20.57	4.98	(RUNOFF)
23.49	4.06	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	314.10	5494.10
10.45	17.08	5490.56
11.57	14.82	5490.51
12.58	14.87	5490.51
14.10	14.53	5490.50
18.95	9.18	5490.37
21.56	6.96	5490.28
23.51	6.58	5490.26

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
PAGE 4

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .71 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.60	.71	5502.28

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .72 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .02		
6.00 DISCHG	.04 .08 .13 .18 .21 .25 .28 .30 .32 .34		
7.00 DISCHG	.36 .37 .38 .39 .40 .41 .42 .43 .43 .44		
8.00 DISCHG	.45 .45 .46 .46 .47 .47 .47 .48 .48 .48		
9.00 DISCHG	.49 .49 .49 .49 .50 .50 .50 .51 .51 .51		
10.00 DISCHG	.51 .52 .52 .52 .52 .53 .53 .53 .53 .54		
11.00 DISCHG	.54 .54 .54 .54 .55 .55 .55 .55 .55 .56		
12.00 DISCHG	.56 .56 .56 .56 .57 .57 .57 .57 .57 .58		

13.00	DISCHG	.58	.58	.58	.58	.58	.59	.59	.59	.59	.59
14.00	DISCHG	.60	.60	.60	.60	.60	.61	.61	.61	.61	.61
15.00	DISCHG	.61	.61	.62	.62	.62	.62	.62	.62	.62	.63
16.00	DISCHG	.63	.63	.63	.63	.63	.63	.63	.64	.64	.64
17.00	DISCHG	.64	.64	.64	.64	.65	.65	.65	.65	.65	.65
18.00	DISCHG	.65	.66	.66	.66	.66	.66	.66	.66	.66	.67
19.00	DISCHG	.67	.67	.67	.67	.67	.67	.67	.68	.68	.68
20.00	DISCHG	.68	.68	.68	.68	.68	.68	.68	.68	.68	.69
21.00	DISCHG	.69	.69	.69	.69	.69	.69	.69	.69	.69	.70
22.00	DISCHG	.70	.70	.70	.70	.70	.70	.70	.70	.70	.70
23.00	DISCHG	.70	.71	.71	.71	.71	.71	.71	.71	.71	.71
24.00	DISCHG	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
25.00	DISCHG	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
26.00	DISCHG	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
27.00	DISCHG	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
28.00	DISCHG	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71
29.00	DISCHG	.71	.71	.71	.71	.71	.71	.71	.71	.71	.71

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .71 CFS, 99.20 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .70 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.40	.70	5420.03

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
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OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	240.98	(RUNOFF)
10.45	10.79	(RUNOFF)
11.60	9.93	(RUNOFF)
12.60	10.04	(RUNOFF)
14.10	10.13	(RUNOFF)
18.95	5.85	(RUNOFF)
20.63	5.25	(RUNOFF)
23.53	4.36	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	240.98	5424.03
10.45	11.24	5420.43
11.60	10.42	5420.41
12.60	10.56	5420.42
14.10	10.68	5420.42
18.96	6.48	5420.26

20.63	5.91	5420.24
23.53	5.04	5420.20

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	194.84	5305.12
10.57	11.20	5300.65
11.78	9.86	5300.59
12.79	10.00	5300.60
14.30	10.02	5300.60
19.06	6.47	5300.39
23.68	4.89	5300.29

OPERATION RUNOFF CROSS SECTION 12

1

TR20 XEQ 03-23-99 10:37 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 PASS 3
PAGE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	613.89	(RUNOFF)
10.45	18.91	(RUNOFF)
11.56	17.84	(RUNOFF)
12.56	17.95	(RUNOFF)
14.06	18.05	(RUNOFF)
18.92	9.89	(RUNOFF)
20.58	9.24	(RUNOFF)
21.55	7.73	(RUNOFF)
23.49	7.50	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	711.61	5310.90
10.46	30.08	5301.35
11.60	26.87	5301.23
12.60	27.08	5301.24
14.11	27.05	5301.24
18.95	16.37	5300.84
20.64	14.21	5300.76
21.59	12.67	5300.70
23.52	12.15	5300.68

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

+

COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL OPERATION ENDJOB

RECORD ID

1

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 SUMMARY
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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 58	RUNOFF	.74	7	2	.10	.0	3.80	24.00	1.27	---	6.17	588.29	793.9
XSECTION 60	RUNOFF	.67	7	2	.10	.0	3.80	24.00	1.40	---	6.20	558.28	835.8
XSECTION 60	ADDHYD	1.41	7	2	.10	.0	3.80	24.00	1.33	5693.76	6.18	1143.57	811.6
XSECTION 62	RUNOFF	.27	7	2	.10	.0	3.80	24.00	1.17	---	6.22	172.87	645.0
XSECTION 62	ADDHYD	1.68	7	2	.10	.0	3.80	24.00	1.31	5712.22	6.19	1314.61	783.9
XSECTION 50	REACH	1.68	7	2	.10	.0	3.80	24.00	1.31	5502.94	6.52	933.43	556.6
XSECTION 50	RUNOFF	.26	7	2	.10	.0	3.80	24.00	2.41	---	6.27	328.86	1279.6
XSECTION 50	ADDHYD	1.93	7	2	.10	.0	3.80	24.00	1.45	5505.77	6.48	1181.56	610.9
XSECTION 52	RUNOFF	1.34	7	2	.10	.0	3.80	24.00	2.74	---	6.06	2963.29	2204.8
XSECTION 52	ADDHYD	3.28	7	2	.10	.0	3.80	24.00	1.98	5510.01	6.09	3329.70	1015.8
XSECTION 38	REACH	3.28	7	2	.10	.0	3.80	24.00	1.98	5493.98	6.19	3283.61	1001.7
XSECTION 38	RUNOFF	.24	7	2	.10	.0	3.80	24.00	1.59	---	6.20	231.77	949.9
XSECTION 38	ADDHYD	3.52	7	2	.10	.0	3.80	24.00	1.95	5496.25	6.20	3515.23	998.1
STRUCTURE 93	RESVOR	3.52	7	2	.10	.0	3.80	24.00	.04	5486.46	24.70?	4.82?	1.4
XSECTION 36	REACH	3.52	7	2	.10	.0	3.80	24.00	.04	5420.14	25.10?	4.81?	1.4
XSECTION 36	RUNOFF	.18	7	2	.10	.0	3.80	24.00	1.48	---	6.16	175.35	953.0
XSECTION 36	ADDHYD	3.71	7	2	.10	.0	3.80	24.00	.11	5422.95	6.16	175.55	47.4
XSECTION 32	REACH	3.71	7	2	.10	.0	3.80	24.00	.11	5362.70	6.35	139.74	37.7
XSECTION 32	RUNOFF	.43	7	2	.10	.0	3.80	24.00	1.44	---	6.20	366.25	845.8
XSECTION 32	ADDHYD	4.14	7	2	.10	.0	3.80	24.00	.25	5365.29	6.24	485.00	117.2
STRUCTURE 7	RESVOR	4.14	7	2	.10	.0	3.80	24.00	.25	5364.02	6.25	485.07	117.2
XSECTION 30	REACH	4.14	7	2	.10	.0	3.80	24.00	.25	5314.14	6.42	434.27	104.9
XSECTION 30	RUNOFF	.27	7	2	.10	.0	3.80	24.00	1.29	---	6.21	202.94	740.6
XSECTION 30	ADDHYD	4.41	7	2	.10	.0	3.80	24.00	.32	5314.99	6.36	581.05	131.7
XSECTION 34	RUNOFF	.18	7	2	.10	.0	3.80	24.00	1.14	---	6.13	141.52	786.2
XSECTION 34	ADDHYD	4.59	7	2	.10	.0	3.80	24.00	.35	5396.34	6.31	659.25	143.5
STRUCTURE 2	RESVOR	4.59	7	2	.10	.0	3.80	24.00	.35	5318.06	6.68	388.06	84.5
XSECTION 28	REACH	4.59	7	2	.10	.0	3.80	24.00	.35	5252.66	7.06	357.20	77.8
XSECTION 28	RUNOFF	.19	7	2	.10	.0	3.80	24.00	1.12	---	6.54	70.91	369.3
XSECTION 28	ADDHYD	4.78	7	2	.10	.0	3.80	24.00	.38	5252.85	6.93	400.43	83.7
STRUCTURE 1	RESVOR	4.78	7	2	.10	.0	3.80	24.00	.38	5285.07	7.02	398.19	83.2
XSECTION 16	RUNOFF	.30	7	2	.10	.0	3.80	24.00	1.25	---	6.22	207.70	692.3

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	16	REACH	.30	7	2	.10	.0	3.80	24.00	1.25	5250.99	6.43	168.11	560.4
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	3.80	24.00	1.25	5329.17	6.89	80.84	269.5
XSECTION	14	RUNOFF	.76	7	2	.10	.0	3.80	24.00	1.59	---	6.19	727.77	956.3
XSECTION	48	RUNOFF	.31	7	2	.10	.0	3.80	24.00	1.44	---	6.33	203.25	657.8
XSECTION	26	REACH	.31	7	2	.10	.0	3.80	24.00	1.44	5493.19	6.53	183.83	594.9
XSECTION	26	RUNOFF	.41	7	2	.10	.0	3.80	24.00	1.49	---	6.12	431.91	1056.0
XSECTION	26	ADDHYD	.72	7	2	.10	.0	3.80	24.00	1.47	5495.36	6.16	494.03	688.1
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	3.80	24.00	.05	5504.37	24.50?	1.06?	1.5
XSECTION	24	REACH	.72	7	2	.10	.0	3.80	24.00	.04	5420.04	25.30?	1.05?	1.5
XSECTION	24	RUNOFF	.49	7	2	.10	.0	3.80	24.00	1.35	---	6.19	385.87	795.6
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	3.80	24.00	.57	5425.19	6.19	385.87	320.8
XSECTION	12	REACH	1.20	7	2	.10	.0	3.80	24.00	.57	5306.51	6.38	323.98	269.3
XSECTION	12	RUNOFF	.66	7	2	.10	.0	3.80	24.00	1.89	---	6.12	888.27	1352.0
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	3.80	24.00	1.04	5315.13	6.17	1070.47	575.5
ALTERNATE 1 STORM 2														
+														
XSECTION	58	RUNOFF	.74	7	2	.10	.0	3.50	24.00	1.07	---	6.17	487.39	657.7
XSECTION	60	RUNOFF	.67	7	2	.10	.0	3.50	24.00	1.20	---	6.20	467.26	699.5
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	3.50	24.00	1.13	5691.81	6.19	952.25	675.8
XSECTION	62	RUNOFF	.27	7	2	.10	.0	3.50	24.00	.98	---	6.22	141.37	527.5
XSECTION	62	ADDHYD	1.68	7	2	.10	.0	3.50	24.00	1.11	5710.44	6.19	1092.02	651.2
XSECTION	50	REACH	1.68	7	2	.10	.0	3.50	24.00	1.11	5500.94	6.53	758.14	452.1
XSECTION	50	RUNOFF	.26	7	2	.10	.0	3.50	24.00	2.14	---	6.28	289.80	1127.6
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	3.50	24.00	1.24	5503.41	6.49	974.75	504.0
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	3.50	24.00	2.45	---	6.06	2659.53	1978.8
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	3.50	24.00	1.74	5507.86	6.08	2959.33	902.8
XSECTION	38	REACH	3.28	7	2	.10	.0	3.50	24.00	1.74	5490.33	6.19	2910.98	888.0
XSECTION	38	RUNOFF	.24	7	2	.10	.0	3.50	24.00	1.37	---	6.21	196.52	805.4
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	3.50	24.00	1.71	5492.25	6.20	3107.21	882.2
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	3.50	24.00	.04	5483.25	24.70?	3.87?	1.1
XSECTION	36	REACH	3.52	7	2	.10	.0	3.50	24.00	.04	5420.12	25.10?	3.87?	1.1
XSECTION	36	RUNOFF	.18	7	2	.10	.0	3.50	24.00	1.26	---	6.16	147.76	803.0
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	3.50	24.00	.10	5422.75	6.16	147.83	39.9
XSECTION	32	REACH	3.71	7	2	.10	.0	3.50	24.00	.10	5362.52	6.36	115.60	31.2
XSECTION	32	RUNOFF	.43	7	2	.10	.0	3.50	24.00	1.23	---	6.21	307.23	709.5

XSECTION	32	ADDHYD	4.14	7	2	.10	.0	3.50	24.00	.21	5364.68	6.24	404.33	97.7
STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	3.50	24.00	.21	5363.50	6.25	405.48	98.0

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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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 2														
XSECTION	30	REACH	4.14	7	2	.10	.0	3.50	24.00	.21	5313.72	6.43	358.22	86.5
XSECTION	30	RUNOFF	.27	7	2	.10	.0	3.50	24.00	1.09	---	6.21	168.11	613.5
XSECTION	30	ADDHYD	4.41	7	2	.10	.0	3.50	24.00	.27	5314.38	6.37	478.27	108.4
XSECTION	34	RUNOFF	.18	7	2	.10	.0	3.50	24.00	.95	---	6.13	115.90	643.9
XSECTION	34	ADDHYD	4.59	7	2	.10	.0	3.50	24.00	.30	5395.42	6.32	541.62	117.9
STRUCTURE	2	RESVOR	4.59	7	2	.10	.0	3.50	24.00	.30	5317.26	6.66	345.89	75.3
XSECTION	28	REACH	4.59	7	2	.10	.0	3.50	24.00	.29	5252.46	7.02	314.02	68.4
XSECTION	28	RUNOFF	.19	7	2	.10	.0	3.50	24.00	.94	---	6.55	57.45	299.2
XSECTION	28	ADDHYD	4.78	7	2	.10	.0	3.50	24.00	.32	5252.63	6.94	350.19	73.2
STRUCTURE	1	RESVOR	4.78	7	2	.10	.0	3.50	24.00	.32	5284.81	7.02	347.90	72.7
XSECTION	16	RUNOFF	.30	7	2	.10	.0	3.50	24.00	1.06	---	6.23	171.19	570.6
XSECTION	16	REACH	.30	7	2	.10	.0	3.50	24.00	1.06	5250.90	6.44	135.23	450.8
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	3.50	24.00	1.06	5327.86	6.85	74.32	247.7
XSECTION	14	RUNOFF	.76	7	2	.10	.0	3.50	24.00	1.37	---	6.20	617.12	810.9
XSECTION	48	RUNOFF	.31	7	2	.10	.0	3.50	24.00	1.23	---	6.34	169.85	549.7
XSECTION	26	REACH	.31	7	2	.10	.0	3.50	24.00	1.23	5492.97	6.54	152.38	493.1
XSECTION	26	RUNOFF	.41	7	2	.10	.0	3.50	24.00	1.28	---	6.13	364.84	892.0
XSECTION	26	ADDHYD	.72	7	2	.10	.0	3.50	24.00	1.26	5494.80	6.16	413.93	576.5
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	3.50	24.00	.04	5503.45	24.50?	.91?	1.3
XSECTION	24	REACH	.72	7	2	.10	.0	3.50	24.00	.04	5420.04	25.40?	.90?	1.3
XSECTION	24	RUNOFF	.49	7	2	.10	.0	3.50	24.00	1.14	---	6.20	321.38	662.6
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	3.50	24.00	.48	5424.67	6.20	321.38	267.1
XSECTION	12	REACH	1.20	7	2	.10	.0	3.50	24.00	.48	5305.89	6.39	266.05	221.2
XSECTION	12	RUNOFF	.66	7	2	.10	.0	3.50	24.00	1.65	---	6.13	768.20	1169.2
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	3.50	24.00	.90	5313.26	6.17	911.58	490.1
ALTERNATE 1 STORM 3														
XSECTION	58	RUNOFF	.74	7	2	.10	.0	3.10	24.00	.83	---	6.18	362.17	488.8
XSECTION	60	RUNOFF	.67	7	2	.10	.0	3.10	24.00	.93	---	6.21	353.30	528.9
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	3.10	24.00	.88	5689.38	6.20	713.80	506.6
XSECTION	62	RUNOFF	.27	7	2	.10	.0	3.10	24.00	.75	---	6.23	102.69	383.2

XSECTION	62	ADDHYD	1.68	7	2	.10	.0	3.10	24.00	.86	5708.22	6.20	815.19	486.1
XSECTION	50	REACH	1.68	7	2	.10	.0	3.10	24.00	.86	5498.52	6.55	545.32	325.2
XSECTION	50	RUNOFF	.26	7	2	.10	.0	3.10	24.00	1.78	---	6.28	238.87	929.5
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	3.10	24.00	.98	5500.52	6.50	721.43	373.0
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	3.10	24.00	2.08	---	6.06	2256.96	1679.3
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	3.10	24.00	1.43	5505.08	6.08	2479.59	756.4

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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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	3											
XSECTION	38	REACH	3.28	7	2	.10	.0	3.10	24.00	1.43	5485.60	6.20	2428.59	740.9
XSECTION	38	RUNOFF	.24	7	2	.10	.0	3.10	24.00	1.09	---	6.21	151.98	622.5
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	3.10	24.00	1.41	5487.08	6.20	2580.08	732.6
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	3.10	24.00	.03	5479.09	24.80?	3.18?	.9
XSECTION	36	REACH	3.52	7	2	.10	.0	3.10	24.00	.03	5420.10	25.20?	3.18?	.9
XSECTION	36	RUNOFF	.18	7	2	.10	.0	3.10	24.00	.99	---	6.17	113.06	614.4
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	3.10	24.00	.08	5422.49	6.17	113.07	30.5
XSECTION	32	REACH	3.71	7	2	.10	.0	3.10	24.00	.08	5362.06	6.38	85.89	23.2
XSECTION	32	RUNOFF	.43	7	2	.10	.0	3.10	24.00	.96	---	6.21	233.22	538.6
XSECTION	32	ADDHYD	4.14	7	2	.10	.0	3.10	24.00	.17	5363.92	6.25	302.28	73.0
STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	3.10	24.00	.17	5362.82	6.26	302.42	73.1
XSECTION	30	REACH	4.14	7	2	.10	.0	3.10	24.00	.17	5313.21	6.55	265.40	64.1
XSECTION	30	RUNOFF	.27	7	2	.10	.0	3.10	24.00	.84	---	6.22	124.88	455.8
XSECTION	30	ADDHYD	4.41	7	2	.10	.0	3.10	24.00	.21	5313.55	6.49	326.50	74.0
XSECTION	34	RUNOFF	.18	7	2	.10	.0	3.10	24.00	.72	---	6.14	84.26	468.1
XSECTION	34	ADDHYD	4.59	7	2	.10	.0	3.10	24.00	.23	5394.07	6.45	352.63	76.8
STRUCTURE	2	RESVOR	4.59	7	2	.10	.0	3.10	24.00	.23	5316.11	6.73	267.83	58.3
XSECTION	28	REACH	4.59	7	2	.10	.0	3.10	24.00	.23	5252.11	7.07	236.67	51.5
XSECTION	28	RUNOFF	.19	7	2	.10	.0	3.10	24.00	.71	---	6.56	41.03	213.7
XSECTION	28	ADDHYD	4.78	7	2	.10	.0	3.10	24.00	.25	5252.23	7.01	261.15	54.6
STRUCTURE	1	RESVOR	4.78	7	2	.10	.0	3.10	24.00	.25	5284.36	7.09	259.20	54.2
XSECTION	16	RUNOFF	.30	7	2	.10	.0	3.10	24.00	.81	---	6.23	126.09	420.3
XSECTION	16	REACH	.30	7	2	.10	.0	3.10	24.00	.81	5250.76	6.47	95.17	317.2
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	3.10	24.00	.81	5326.16	6.82	61.60	205.3
XSECTION	14	RUNOFF	.76	7	2	.10	.0	3.10	24.00	1.09	---	6.20	477.35	627.3
XSECTION	48	RUNOFF	.31	7	2	.10	.0	3.10	24.00	.97	---	6.35	128.19	414.9
XSECTION	26	REACH	.31	7	2	.10	.0	3.10	24.00	.97	5492.69	6.56	113.13	366.1

XSECTION	26	RUNOFF	.41	7	2	.10	.0	3.10	24.00	1.00	---	6.13	280.18	685.0
XSECTION	26	ADDHYD	.72	7	2	.10	.0	3.10	24.00	.99	5494.10	6.17	314.10	437.5
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	3.10	24.00	.03	5502.28	24.60?	.71?	1.0
XSECTION	24	REACH	.72	7	2	.10	.0	3.10	24.00	.03	5420.03	25.40?	.70?	1.0
XSECTION	24	RUNOFF	.49	7	2	.10	.0	3.10	24.00	.89	---	6.21	240.98	496.9
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	3.10	24.00	.37	5424.03	6.21	240.98	200.3
XSECTION	12	REACH	1.20	7	2	.10	.0	3.10	24.00	.37	5305.12	6.41	194.84	162.0
XSECTION	12	RUNOFF	.66	7	2	.10	.0	3.10	24.00	1.34	---	6.13	613.89	934.4
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	3.10	24.00	.71	5310.90	6.17	711.61	382.6

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TR20 XEQ 03-23-99 10:37	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 SUMMARY
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SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS							PEAK			
OUTFLOW+										VOLUME	MAIN	ITER-	Q AND A	PEAK	S/Q	ATT-	TRAVEL TIME			
XSEC	REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	@PEAK	KIN	STOR-	KINE-		
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	FLOW (CFS)	BASE (IN)	INCR (HR)	#	COEFF (X)	POWER (M)	FACTOR (K*)	O/I (Q*)	(K) (SEC)	COEFF (C)	AGE (HR)	MATIC (HR)	
ALTERNATE		1	STORM	1																
												.994								
50	8600	1312	6.2	930	6.5			0	1.31	.10	1	1.35	.232	.709	975	.31	.20	.28		
						1180	6.5													
												1.18								
38	2700	3322	6.1	3283	6.2			0	1.98	.10	1	1.34	.027	.988	228	.88?	.10	.06		
						3514	6.2													
												.759								
36	3000	5	24.7	5	25.1			0	.04*	.10	1	1.53	.004	.999	1357	.23	.40	.38		
						172	6.2													
												.699								
32	4200	172	6.2	138	6.4			0	.11	.10	1	1.48	.079	.799	686	.42	.20	.20		
						479	6.2													
												1.07								
30	3400	475	6.2	433	6.4			0	.25	.10	1	1.35	.063	.911	489	.54	.20	.14		
						575	6.4													
												.280								
28	4200	388	6.7	357	7.1			0	.35	.10	1	1.47	.066	.919	1017	.30	.40	.29		
						400	6.9													
												.205								
16	3500	207	6.2	167	6.4			0	1.25	.10	1	1.64	.115	.808	690	.41	.20	.20		
						---	---													
												1.29								
26	4300	202	6.3	183	6.5			0	1.44	.10	1	1.41	.067	.908	537	.50	.20	.15		

		487		6.2															
+	24	4200	1	24.5	1	25.3		0	.05*	.10	1	.927	1.45	.016	.992	2994	.11	.30	.8
+							386	6.2											
+	12	5500	386	6.2	323	6.4		0	.57	.10	1	1.58	1.36	.108	.838	591	.47	.20	.1
+							1060	6.2											
		ALTERNATE		1		STORM		2											
+	50	8600	1091	6.2	753	6.5		0	1.11	.10	1	.975	1.36	.240	.690	1019	.30	.20	.30
+							974	6.5											
+	38	2700	2951	6.1	2910	6.2		0	1.74	.10	1	1.15	1.34	.028	.986	235	.87?	.10	.07
+							3107	6.2											
+	36	3000	4	24.7	4	25.1		0	.04*	.10	1	.759	1.53	.005	.999	1464	.22	.30	.41
+							146	6.2											
+	32	4200	146	6.2	115	6.4		0	.10	.10	1	.686	1.48	.083	.787	717	.40	.20	.2
+							397	6.2											
+	30	3400	395	6.2	355	6.4		0	.21	.10	1	1.06	1.35	.065	.899	511	.52	.20	.1
+							475	6.4											
+	28	4200	345	6.7	314	7.0		0	.30	.10	1	.274	1.47	.073	.909	1050	.29	.30	.30
+							350	6.9											
+	16	3500	170	6.2	133	6.4		0	1.06	.10	1	.204	1.65	.124	.786	743	.39	.20	.2
+							---	---											
+	26	4300	168	6.3	151	6.5		0	1.23	.10	1	1.27	1.42	.069	.900	562	.49	.20	.1
+							409	6.2											
+	24	4200	1	24.5	1	25.4		0	.04*	.10	1	.927	1.45	.017	.991	3143	.11	.40	.8
+							321	6.2											
+	12	5500	321	6.2	266	6.4		0	.48	.10	1	1.56	1.37	.111	.828	618	.45	.20	.1
+							903	6.2											
		ALTERNATE		1		STORM		3											
+	50	8600	815	6.2	537	6.5		0	.86	.10	1	.949	1.36	.252	.659	1093	.28	.20	.32
+							721	6.5											
+	38	2700	2471	6.															

+	28	4200	267	6.7	236	7.1		0	.23	.10	1	.261	1.48	.080	.884	1127	.28	.40	.32
+							261	7.0											
+	16	3500	124	6.2	95	6.5		0	.81	.10	1	.202	1.65	.140	.762	837	.35	.30	.24
+							---	---											
+	26	4300	126	6.3	112	6.6		0	.97	.10	1	1.25	1.43	.071	.889	603	.46	.30	.17
+							311	6.2											
+	24	4200	1	24.6	1	25.4		0	.03*	.10	1	.927	1.45	.020	.987	3388	.10	.00	.94
+							241	6.2											
+	12	5500	241	6.2	195	6.4		0	.37	.10	1	1.53	1.37	.117	.809	663	.43	.20	.19
+							706	6.2											
+	1																		

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 SUMMARY
PAGE 55

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	3
0 STRUCTURE 94	.72			
+				
ALTERNATE 1		1.06	.91	.71
0 STRUCTURE 93	3.52			
+				
ALTERNATE 1		4.82	3.87	3.18
0 STRUCTURE 18	.30			
+				
ALTERNATE 1		80.84	74.32	61.60
0 STRUCTURE 7	4.14			
+				
ALTERNATE 1		485.07	405.48	302.42
0 STRUCTURE 2	4.59			
+				
ALTERNATE 1		388.06	345.89	267.83
0 STRUCTURE 1	4.78			
+				
ALTERNATE 1		398.19	347.90	259.20
0 XSECTION 12	1.86			
+				
ALTERNATE 1		1070.47	911.58	711.61
0 XSECTION 14	.76			
+				
ALTERNATE 1		727.77	617.12	477.35
0 XSECTION 16	.30			
+				
ALTERNATE 1		168.11	135.23	95.17
0 XSECTION 24	1.20			
+				
ALTERNATE 1		385.87	321.38	240.98

0 XSECTION	26	.72			
+					
ALTERNATE	1		494.03	413.93	314.10
0 XSECTION	28	4.78			
+					
ALTERNATE	1		400.43	350.19	261.15
0 XSECTION	30	4.41			
+					
ALTERNATE	1		581.05	478.27	326.50
0 XSECTION	32	4.14			
+					
ALTERNATE	1		485.00	404.33	302.28
1					

TR20 XEQ 03-23-99 10:37
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
EXISTING CONDITIONS : XS2_OUT.TXT

JOB 1 SUMMARY
PAGE 56

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	3
0 XSECTION 34	4.59			
+				
ALTERNATE 1		659.25	541.62	352.63
0 XSECTION 36	3.71			
+				
ALTERNATE 1		175.55	147.83	113.07
0 XSECTION 38	3.52			
+				
ALTERNATE 1		3515.23	3107.21	2580.08
0 XSECTION 48	.31			
+				
ALTERNATE 1		203.25	169.85	128.19
0 XSECTION 50	1.93			
+				
ALTERNATE 1		1181.56	974.75	721.43
0 XSECTION 52	3.28			
+				
ALTERNATE 1		3329.70	2959.33	2479.59
0 XSECTION 58	.74			
+				
ALTERNATE 1		588.29	487.39	362.17
0 XSECTION 60	1.41			
+				
ALTERNATE 1		1143.57	952.25	713.80
0 XSECTION 62	1.68			
+				
ALTERNATE 1		1314.61	1092.02	815.19

1END OF 1 JOBS IN THIS RUN

APPENDIX C

DEVELOPED CONDITIONS

TR20 DATA

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

JOB TR-20

SUMMARY NOPLOTS

TITLE SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW

TITLE DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3SI_OUT.TXT

5 RAINFL 7	0.5				
8	0.0000	0.0040	0.0080	0.0100	0.0140
8	0.0190	0.0220	0.0260	0.0300	0.0450
8	0.0600	0.1000	0.7100	0.7500	0.7750
8	0.8000	0.8200	0.8300	0.8400	0.8500
8	0.8600	0.8700	0.8750	0.8850	0.8900
8	0.9000	0.9050	0.9100	0.9200	0.9250
8	0.9300	0.9350	0.9400	0.9450	0.9500
8	0.9550	0.9600	0.9650	0.9700	0.9730
8	0.9750	0.9800	0.9830	0.9870	0.9900
8	0.9930	0.9960	0.9999	1.0000	1.0000

9 ENDTBL

2 XSECTN 002	1.0		
8	5340.0	0.0	0.0
8	5340.7	10.0	2.84
8	5342.9	50.0	8.90
8	5346.8	100.0	15.35
8	5362.5	500.0	62.87
8	5392.8	1000.0	121.15

9 ENDTBL

2 XSECTN 004	1.0		
8	5320.0	0.0	0.0
8	5320.4	10.0	5.70
8	5321.4	50.0	15.46
8	5323.0	100.0	24.04
8	5327.8	500.0	71.09
8	5335.6	1000.0	118.03

9 ENDTBL

2 XSECTN 006	1.0		
8	5320.0	0.0	0.0
8	5320.3	10.0	6.72

8	5320.9	50.0	18.34
8	5322.0	100.0	28.60
8	5324.5	500.0	83.67
8	5328.3	1000.0	135.58
9	ENDTBL		
2	XSECTN 008	1.0	
8	5320.0	0.0	0.0
8	5320.5	10.0	4.92
8	5321.6	50.0	14.17
8	5323.3	100.0	22.81
8	5327.3	500.0	72.00
8	5332.9	1000.0	119.77

1

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

9	ENDTBL		
2	XSECTN 010	1.0	
8	5320.0	0.0	0.0
8	5320.6	10.0	5.24
8	5321.9	50.0	15.74
8	5323.9	100.0	25.78
8	5328.3	500.0	83.60
8	5334.4	1000.0	139.88
9	ENDTBL		
2	XSECTN 012	1.0	
8	5300.0	0.0	0.0
8	5300.6	10.0	4.01
8	5302.1	50.0	12.53
8	5304.1	100.0	20.77
8	5308.4	500.0	68.46
8	5314.3	1000.0	114.90
9	ENDTBL		
2	XSECTN 014	1.0	
8	5280.0	0.0	0.0
8	5280.6	10.0	4.84
8	5281.9	50.0	14.85
8	5283.8	100.0	24.48
8	5288.0	500.0	80.08
8	5293.6	1000.0	134.18
9	ENDTBL		
2	XSECTN 016	1.0	
8	5250.0	0.0	0.0
8	5250.1	10.0	10.67
8	5250.4	50.0	28.19
8	5250.8	100.0	42.92
8	5251.9	500.0	115.15
8	5253.6	1000.0	177.46
9	ENDTBL		
2	XSECTN 018	1.0	
8	5480.0	0.0	0.0
8	5480.2	10.0	9.34
8	5480.7	50.0	25.00
8	5481.4	100.0	38.45
8	5483.3	500.0	107.48
8	5486.1	1000.0	170.17
9	ENDTBL		
2	XSECTN 020	1.0	

8	5460.0	0.0	0.0
8	5460.5	10.0	4.64
8	5461.8	50.0	14.20
8	5463.7	100.0	23.39
1			

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

8	5467.7	500.0	76.44
8	5473.2	1000.0	128.05
9	ENDTBL		
2	XSECTN	021	1.0
8	5600.0	0.0	0.0
8	5600.6	10.0	5.79
8	5602.0	50.0	17.66
8	5604.1	100.0	29.07

8		5608.5	500.0	94.89
8		5614.6	1000.0	158.94
9	ENDTBL			
2	XSECTN 022	1.0		
8		5460.0	0.0	0.0
8		5460.4	10.0	3.73
8		5461.2	50.0	11.22
8		5462.4	100.0	18.38
8		5465.1	500.0	59.55
8		5468.7	1000.0	99.55
9	ENDTBL			
2	XSECTN 024	1.0		
8		5420.0	0.0	0.0
8		5420.4	10.0	5.15
8		5421.5	50.0	15.61
8		5422.9	100.0	25.64
8		5426.1	500.0	83.32
8		5430.5	1000.0	139.40
9	ENDTBL			
2	XSECTN 026	1.0		
8		5490.0	0.0	0.0
8		5490.4	10.0	4.35
8		5491.3	50.0	13.04
8		5492.6	100.0	21.34
8		5495.4	500.0	69.01
8		5499.3	1000.0	115.33
9	ENDTBL			
2	XSECTN 028	1.0		
8		5250.0	0.0	0.0
8		5250.2	10.0	12.06
8		5250.7	50.0	33.86
8		5251.5	100.0	53.75
8		5253.3	500.0	164.52
8		5255.8	1000.0	270.93
9	ENDTBL			
2	XSECTN 030	1.0		
8		5310.0	0.0	0.0
8		5310.4	10.0	5.39

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

8	5311.2	50.0	17.30
8	5312.3	100.0	28.86
8	5314.5	500.0	95.65
8	5317.5	1000.0	160.61

9 ENDTBL

2 XSECTN 032

1.0

8	5360.0	0.0	0.0
8	5360.3	10.0	6.18
8	5361.2	50.0	17.66
8	5362.4	100.0	28.29
8	5365.4	500.0	88.38
8	5369.5	1000.0	146.45

9 ENDTBL

2 XSECTN 034

1.0

8	5390.0	0.0	0.0
8	5390.3	10.0	5.13
8	5391.1	50.0	14.64
8	5392.3	100.0	23.43
8	5395.1	500.0	73.03
8	5399.0	1000.0	120.95

9 ENDTBL

2 XSECTN 036

1.0

8	5420.0	0.0	0.0
8	5420.3	10.0	5.38
8	5421.2	50.0	15.38
8	5422.4	100.0	24.66
8	5425.3	500.0	77.04
8	5429.4	1000.0	127.69

9 ENDTBL

2 XSECTN 038

1.0

8	5460.0	0.0	0.0
8	5460.4	10.0	6.03
8	5461.5	50.0	17.81
8	5463.1	100.0	28.97
8	5466.7	500.0	92.93
8	5471.6	1000.0	155.04

9 ENDTBL

2 XSECTN 040

1.0

8	5580.0	0.0	0.0
8	5580.4	10.0	3.88
8	5581.5	50.0	11.54
8	5583.0	100.0	18.84
8	5586.3	500.0	60.74
8	5591.0	1000.0	101.47

9 ENDTBL

2 XSECTN 042

1.0

1

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

8	5660.0	0.0	0.0
8	5660.4	10.0	4.38
8	5661.4	50.0	14.55
8	5662.8	100.0	24.45
8	5665.9	500.0	81.67
8	5670.3	1000.0	91.87

9	ENDTBL			
2	XSECTN	044	1.0	
8			5720.0	0.0 0.0
8			5720.4	10.0 3.38
8			5721.3	50.0 9.97
8			5722.6	100.0 16.21
8			5725.7	500.0 51.99
8			5729.9	1000.0 86.76

9	ENDTBL			
2	XSECTN	046	1.0	
8			5720.0	0.0 0.0
8			5720.4	10.0 3.18
8			5721.2	50.0 9.36
8			5722.5	100.0 15.21
8			5725.4	500.0 48.65
8			5729.5	1000.0 81.14

9	ENDTBL			
2	XSECTN	048	1.0	
8			5560.0	0.0 0.0
8			5560.4	10.0 7.22
8			5561.1	50.0 23.33
8			5562.0	100.0 40.62
8			5563.6	500.0 135.83
8			5565.8	1000.0 228.43

9	ENDTBL			
2	XSECTN	050	1.0	
8			5490.0	0.0 0.0
8			5490.6	10.0 6.04
8			5491.9	50.0 18.37
8			5493.8	100.0 30.19
8			5498.0	500.0 98.33
8			5503.7	1000.0 164.59

9	ENDTBL			
2	XSECTN	052	1.0	
8			5490.0	0.0 0.0
8			5490.2	10.0 4.35
8			5490.8	50.0 11.99
8			5491.6	100.0 18.81
8			5493.6	500.0 56.00
8			5496.5	1000.0 91.35

1

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

9	ENDTBL			
2	XSECTN	054	1.0	
8			6010.0	0.0 0.0
8			6010.5	10.0 2.18
8			6011.5	50.0 6.70
8			6013.1	100.0 11.06
8			6016.5	500.0 36.27
8			6021.1	1000.0 60.83

9	ENDTBL			
2	XSECTN	056	1.0	
8			6000.0	0.0 0.0
8			6000.5	10.0 2.22
8			6001.6	50.0 6.83
8			6003.1	100.0 11.27

8		6006.5	500.0	36.98
8		6011.2	1000.0	62.03
9	ENDTBL			
2	XSECTN 058	1.0		
8		5680.0	0.0	0.0
8		5680.5	10.0	2.24
8		5681.6	50.0	6.90
8		5683.2	100.0	11.39
8		5686.6	500.0	37.38
8		5691.3	1000.0	62.71
9	ENDTBL			
2	XSECTN 060	1.0		
8		5680.0	0.0	0.0
8		5680.5	10.0	2.53
8		5681.7	50.0	7.85
8		5683.5	100.0	12.99
8		5687.2	500.0	42.75
8		5692.3	1000.0	71.75
9	ENDTBL			
2	XSECTN 062	1.0		
8		5700.0	0.0	0.0
8		5700.4	10.0	2.93
8		5701.4	50.0	8.94
8		5702.7	100.0	14.71
8		5705.7	500.0	48.02
8		5709.7	1000.0	80.42
9	ENDTBL			
3	STRUCT 01			
8		5280.0	0.0	0.0
8		5282.0	30.0	0.30
8		5284.0	188.0	1.49
8		5286.0	581.0	4.05

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

8		5287.0	1138.0	6.00
8		5288.0	1909.0	8.47
9	ENDTBL			
3	STRUCT 02			
8		5310.0	0.0	0.0
8		5312.0	57.0	0.27
8		5314.0	143.0	1.92
8		5316.0	260.0	6.24
8		5317.0	332.0	9.80
8		5318.0	385.0	14.51
8		5319.0	405.0	20.53
8		5320.0	417.0	28.01
9	ENDTBL			
3	STRUCT 07			
8		5360.0	0.0	0.0
8		5362.0	180.0	0.07
8		5364.0	480.0	0.35
8		5366.0	900.0	0.94
8		5367.0	1100.0	1.39
8		5368.0	1300.0	1.94
8		5369.0	1600.0	2.63
8		5370.0	1700.0	3.46

9	ENDTBL			
3	STRUCT	18		
8		5320.0	0.0	0.0
8		5322.0	18.0	0.19
8		5324.0	45.0	0.76
8		5326.0	60.0	1.75
8		5327.0	70.0	2.42
8		5328.0	75.0	3.22
8		5329.0	80.0	4.15
8		5330.0	85.0	5.22
9	ENDTBL			
3	STRUCT	24		
8		5320.0	0.0	0.0
8		5321.9	100.0	0.42
8		5322.4	150.0	0.56
8		5322.9	200.0	0.71
8		5323.5	250.0	0.85
8		5323.9	275.0	0.94
8		5324.2	283.0	0.99
9	ENDTBL			
3	STRUCT	28		
8		5250.0	0.0	0.0
8		5252.0	96.0	0.04
8		5254.0	288.0	0.19

1

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

8		5256.0	504.0	0.49
8		5257.0	636.0	0.71
9	ENDTBL			
3	STRUCT	31		
8		5300.0	0.0	0.0
8		5302.0	500.0	0.04
8		5304.0	1000.0	0.16
8		5306.0	1850.0	0.35
8		5307.0	2250.0	0.47
8		5308.0	2750.0	0.61
8		5309.0	3400.0	0.78
8		5310.0	4000.0	0.95
9	ENDTBL			
3	STRUCT	32		
8		5310.0	0.0	0.0
8		5312.0	380.0	0.04
8		5314.0	760.0	0.16
8		5316.0	1406.0	0.35
8		5317.0	1824.0	0.47
8		5318.0	2128.0	0.61
8		5319.0	2660.0	0.78
8		5320.0	3040.0	0.95
9	ENDTBL			
3	STRUCT	33		
8		5320.0	0.0	0.0
8		5322.0	400.0	0.05
8		5324.0	1000.0	0.21
8		5326.0	1850.0	0.52
8		5327.0	2500.0	0.74
8		5328.0	3000.0	1.01

8		5429.0	3500.0	1.34
8		5430.0	4000.0	1.73
9	ENDTBL			
3	STRUCT	35		
8		5350.0	0.0	0.0
8		5352.0	468.0	0.05
8		5354.0	1248.0	0.21
8		5356.0	2340.0	0.52
8		5357.0	2860.0	0.74
8		5358.0	3380.0	1.01
8		5359.0	3900.0	1.34
9	ENDTBL			
3	STRUCT	34		
8		5340.0	0.0	0.0
8		5342.0	450.0	0.05
8		5344.0	1000.0	0.21

1

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

8		5346.0	1850.0	0.52
8		5347.0	2400.0	0.74
8		5348.0	2900.0	1.01
8		5349.0	3500.0	1.34
9	ENDTBL			
3	STRUCT	37		
8		5560.0	0.0	0.0
8		5562.0	26.0	0.02
8		5564.0	80.0	0.13
8		5566.0	145.0	0.35
8		5567.0	170.0	0.53
8		5568.0	190.0	0.76
8		5569.0	210.0	1.04
8		5570.0	220.0	1.39
9	ENDTBL			
3	STRUCT	38		
8		5570.0	0.0	0.0
8		5572.0	110.0	0.04
8		5574.0	200.0	0.20
8		5576.0	370.0	0.53
8		5577.0	480.0	0.77
8		5578.0	600.0	1.07
8		5579.0	700.0	1.43
8		5580.0	800.0	1.87
9	ENDTBL			
3	STRUCT	39		
8		5600.0	0.0	0.0
8		5602.0	26.0	0.03
8		5604.0	80.0	0.14
8		5606.0	146.0	0.39
8		5607.0	170.0	0.58
8		5608.0	190.0	0.83
8		5609.0	210.0	1.13
8		5610.0	220.0	1.50
9	ENDTBL			
3	STRUCT	41		
8		5500.0	0.0	0.0
8		5502.0	44.0	0.02

8	5504.0	130.0	0.10
8	5506.0	200.0	0.27
8	5507.0	434.0	0.41
8	5508.0	905.0	0.57
8	5509.0	1589.0	0.78
8	5510.0	2508.0	1.03

9 ENDTBL
3 STRUCT 42

1

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

8	5250.0	0.0	0.0
8	5254.0	360.0	0.65
8	5258.0	840.0	2.98
8	5260.0	1000.0	4.98
8	5262.0	1160.0	7.63
8	5264.0	1280.0	11.03
8	5265.0	1360.0	13.03
8	5266.0	1420.0	15.25

9 ENDTBL
3 STRUCT 43

8	5320.0	0.0	0.0
8	5322.0	75.0	0.02
8	5324.0	190.0	0.08
8	5326.0	380.0	0.19
8	5327.0	475.0	0.26
8	5328.0	600.0	0.33
8	5329.0	650.0	0.41
8	5330.0	750.0	0.51

9 ENDTBL
3 STRUCT 44

8	5340.0	0.0	0.0
8	5342.0	112.0	0.02
8	5344.0	350.0	0.08
8	5346.0	602.0	0.19
8	5347.0	742.0	0.26
8	5348.0	840.0	0.33
8	5349.0	1070.0	0.41
8	5350.0	1432.0	0.51

9 ENDTBL
3 STRUCT 45

8	5340.0	0.0	0.0
8	5342.0	135.0	0.02
8	5344.0	375.0	0.08
8	5346.0	676.0	0.19
8	5347.0	826.0	0.26
8	5348.0	975.0	0.33
8	5349.0	1215.0	0.41
8	5350.0	1657.0	0.51

9 ENDTBL
3 STRUCT 46

8	5340.0	0.0	0.0
8	5344.0	126.0	0.02
8	5346.0	222.0	0.04
8	5347.0	252.0	0.05
8	5348.0	306.0	0.06
8	5349.0	448.0	0.08

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

8		5350.0	829.0	0.10	
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9	ENDTBL				
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3	STRUCT	97			
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8		5340.0	0.0	0.0	
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8		5342.0	44.0	3.14	
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8		5344.0	130.0	12.03	
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8		5346.0	200.0	22.40	
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8		5347.0	230.0	26.15	
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8		5348.0	260.0	29.95	
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8		5349.0	280.0	33.79	
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8		5350.0	300.0	37.68	
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9	ENDTBL				
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3	STRUCT	98			
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8		5440.0	0.0	0.0	
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8		5442.0	13.0	5.21	
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8		5444.0	26.0	17.36	
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8		5446.0	35.0	25.72	
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8		5447.0	38.0	29.96	
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8		5448.0	42.0	34.22	
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8		5449.0	45.0	38.52	
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8		5450.0	47.0	42.85	
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9	ENDTBL				
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3	STRUCT	99			
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8		5520.0	0.0	0.0	
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8		5522.0	18.0	5.21	
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8		5524.0	45.0	12.40	
---	--	--------	------	-------	--

8		5526.0	60.0	18.37	
---	--	--------	------	-------	--

8		5527.0	70.0	21.40	
---	--	--------	------	-------	--

8		5528.0	75.0	24.44	
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8		5529.0	80.0	27.51	
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8		5530.0	85.0	30.60	
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9	ENDTBL				
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6	RUNOFF	1	054	7	0.6080	77.3	0.340	1
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6	RUNOFF	1	056	6	0.2370	80.0	0.313	1
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6	ADDHYD	4	044	7 6 5				1
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6	REACH	3	044	5 4	4400.0			1
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6	RUNOFF	1	044	3	0.1330	69.0	0.423	1
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6	ADDHYD	4	044	4 3 2				1
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6	REACH	3	042	2 7	5700.0			1
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6	RUNOFF	1	042	6	0.2790	70.5	0.464	1
---	--------	---	-----	---	--------	------	-------	---

6	ADDHYD	4	042	7 6 5				1
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6	RUNOFF	1	046	2	0.3820	64.6	0.452	1
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6	ADDHYD	4	042	5 2 1				1
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6	REACH	3	040	1 6	6600.0			1
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6	RUNOFF	1	040	5	0.5180	69.0	0.521	1
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6	ADDHYD	4	040	6 5 4				1
---	--------	---	-----	-------	--	--	--	---

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

6	REACH	3	018	4 7	5500.0			1
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6	RUNOFF	1	018	6	0.4530	71.2	0.730	1
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6	ADDHYD	4	018	7	6	5					1
6	RESVOR	2	42	5	3		5250.0				1 1
6	RUNOFF	1	021		1		0.4100	72.4	0.603		1
6	REACH	3	021	1	7		5500.0				1
6	RESVOR	2	39	7	2		5600.0				1 1
6	REACH	3	020	2	7		4500.0				1
6	RUNOFF	1	020		1		0.2990	84.6	0.346		1
6	ADDHYD	4	020	7	1	5					1
6	ADDHYD	4	018	3	5	4					1
6	REACH	3	006	4	3		5500.0				1
6	RUNOFF	1	006		2		0.4540	76.3	0.477		1
6	ADDHYD	4	006	3	2	7					1
6	RESVOR	2	35	7	3		5350.0				1 1
6	RESVOR	2	34	3	2		5340.0				1 1
6	RESVOR	2	33	2	7		5320.0				1 1
6	RESVOR	2	32	7	6		5310.0				1 1
6	RESVOR	2	31	6	1		5300.0				1 1
6	RUNOFF	1	004		7		0.5370	71.6	0.581		1
6	REACH	3	004	7	6		7200.0				1
6	RESVOR	2	45	6	5		5340.0				1 1
6	RESVOR	2	44	5	4		5340.0				1 1
6	RESVOR	2	43	4	2		5320.0				1 1
6	RUNOFF	1	002		7		0.2200	70.8	0.378		1
6	REACH	3	002	7	6		3750.0				1
6	RESVOR	2	46	6	3		5340.0				1 1
6	RUNOFF	1	022		7		0.5610	79.1	0.618		1
6	REACH	3	022	7	6		2500.0				1
6	RESVOR	2	28	6	5		5250.0				1 1
6	REACH	3	010	5	6		5000.0				1
6	RUNOFF	1	010		5		0.3500	83.1	0.439		1
6	ADDHYD	4	010	6	5	7					1
6	RESVOR	2	97	7	5		5340.0				1 1
6	RESVOR	2	24	5	4		5320.0				1 1
6	RUNOFF	1	008		5		0.2500	92.9	0.204		1
ENDATA											
7	INCREM	6					0.10				
7	COMPUT	7	054	008			0.0	3.80	1.0	7 2	01 01
ENDCMP 1											
7	INCREM	6					0.10				
7	COMPUT	7	054	008			0.0	3.50	1.0	7 2	01 02
ENDCMP 1											
7	INCREM	6					0.10				
7	COMPUT	7	054	008			0.0	3.10	1.0	7 2	01 03
ENDCMP 1											

1

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

ENDJOB 2

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

EXECUTIVE CONTROL OPERATION INCREM

+

MAIN TIME INCREMENT = .10 HOURS

RECORD ID

EXECUTIVE CONTROL OPERATION COMPUT

+

FROM XSECTION 54

RECORD ID

+
 TO XSECTION 8
 STARTING TIME = .00 RAIN DEPTH = 3.80 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
 ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	797.88	(RUNOFF)
7.46	52.01	(RUNOFF)
10.41	21.68	(RUNOFF)
11.52	20.99	(RUNOFF)
12.52	21.15	(RUNOFF)
14.02	21.35	(RUNOFF)
18.91	11.35	(RUNOFF)
20.53	10.89	(RUNOFF)
21.51	8.97	(RUNOFF)
23.47	8.81	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	366.84	(RUNOFF)
7.46	21.78	(RUNOFF)
10.40	9.01	(RUNOFF)
11.50	8.79	(RUNOFF)
12.50	8.84	(RUNOFF)
14.00	8.91	(RUNOFF)
18.88	4.68	(RUNOFF)
20.52	4.53	(RUNOFF)
23.46	3.66	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
 PAGE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	1163.44	5731.27
7.46	73.79	5721.92
10.40	30.69	5720.87
11.51	29.78	5720.84
12.51	29.99	5720.85
14.01	30.25	5720.86
18.89	16.03	5720.54
20.53	15.42	5720.52
21.51	12.68	5720.46
23.47	12.47	5720.46

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 44 BY 158.1 CFS

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

OPERATION REACH CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1116.25	5730.88
7.56	73.76	5721.92
10.52	30.68	5720.87
11.63	29.50	5720.84
12.63	29.71	5720.84
14.14	29.96	5720.85
19.00	16.03	5720.54
20.65	15.32	5720.52
21.63	12.62	5720.46
23.58	12.36	5720.45

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	96.82	(RUNOFF)
7.46	8.72	(RUNOFF)
10.45	3.74	(RUNOFF)
11.56	3.55	(RUNOFF)
12.56	3.58	(RUNOFF)
14.06	3.64	(RUNOFF)
18.95	2.02	(RUNOFF)
23.49	1.54	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 44

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
 PAGE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1210.82	5731.67
10.47	34.42	5720.95
11.62	32.97	5720.92
12.62	33.21	5720.92
14.12	33.53	5720.93
18.96	18.05	5720.58
20.64	17.12	5720.56
21.62	14.18	5720.49
23.57	13.88	5720.49

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 42 BY 210.6 CFS

*** WARNING REACH 42 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	1187.86	5671.95
10.58	34.41	5661.01
11.73	32.83	5660.97
12.74	33.07	5660.98

14.24	33.38	5660.98
19.06	18.05	5660.60
20.75	17.08	5660.58
21.73	14.15	5660.50
23.67	13.82	5660.50

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	212.52	(RUNOFF)
10.45	8.23	(RUNOFF)
11.58	7.67	(RUNOFF)
12.58	7.77	(RUNOFF)
14.08	7.83	(RUNOFF)
18.94	4.40	(RUNOFF)
20.60	4.04	(RUNOFF)
23.51	3.33	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(-.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
PAGE 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	1360.41	5673.47
10.47	42.59	5661.21
11.70	39.95	5661.15
12.70	40.26	5661.16
14.21	40.62	5661.17
18.96	22.45	5660.71
20.73	20.83	5660.67
21.70	17.46	5660.59
23.62	16.78	5660.57

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	196.23	(RUNOFF)
10.45	9.15	(RUNOFF)
11.57	8.60	(RUNOFF)
12.57	8.75	(RUNOFF)
14.08	8.89	(RUNOFF)
18.92	5.03	(RUNOFF)
20.60	4.65	(RUNOFF)
23.51	3.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	1527.68	5674.94
10.46	51.74	5661.45

11.68	48.10	5661.35
12.68	48.51	5661.36
14.18	49.00	5661.38
18.95	27.48	5660.84
20.70	25.24	5660.78
21.67	21.30	5660.68
23.59	20.50	5660.66

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 40 BY 521.4 CFS

OPERATION REACH CROSS SECTION 40

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
PAGE

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	1367.53	5594.46
10.57	51.68	5581.55
11.84	46.61	5581.41
12.84	47.02	5581.42
14.34	47.41	5581.43
19.06	27.46	5580.88
20.87	24.41	5580.80
21.83	21.00	5580.70
23.73	20.03	5580.68

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	329.36	(RUNOFF)
10.45	14.54	(RUNOFF)
11.60	13.31	(RUNOFF)
12.60	13.45	(RUNOFF)
14.11	13.56	(RUNOFF)
18.89	7.83	(RUNOFF)
20.64	7.01	(RUNOFF)
21.60	6.06	(RUNOFF)
23.53	5.82	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	1587.30	5596.52
10.48	66.14	5581.98
11.79	58.19	5581.75
12.79	58.75	5581.76
14.30	59.19	5581.78
18.96	35.28	5581.10
20.83	30.63	5580.97
21.78	26.70	5580.86
23.66	25.27	5580.82

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 18 BY 586.3 CFS

OPERATION REACH CROSS SECTION 18

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
PAGE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.58	1409.62	5488.39
10.61	66.05	5480.92
11.96	56.41	5480.79
12.96	56.94	5480.80
14.48	57.10	5480.80
19.08	35.26	5480.52
21.02	29.52	5480.44
21.94	26.37	5480.40
23.80	24.67	5480.38

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	256.69	(RUNOFF)
10.46	13.59	(RUNOFF)
11.70	11.72	(RUNOFF)
12.71	11.73	(RUNOFF)
14.22	11.72	(RUNOFF)
18.91	7.28	(RUNOFF)
21.69	5.49	(RUNOFF)
23.58	5.13	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	1599.08	5489.46
10.54	79.56	5481.11
11.93	66.87	5480.94
12.93	67.46	5480.94
14.44	67.56	5480.95
18.98	42.52	5480.61
21.00	35.06	5480.51
21.90	31.61	5480.47
23.75	29.31	5480.44

*** WARNING - STRUCTURE 42 DELTA T IS TOO LARGE. 0 /2 > S /DELTA T OCCURED 3 TIMES STARTING WITH POINT259

OPERATION RESVOR STRUCTURE 42

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
PAGE 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.74	1344.96	5264.81
10.56	79.58	5250.88
11.95	66.80	5250.74
12.95	67.40	5250.75
14.47	67.51	5250.75
19.00	42.52	5250.47
21.02	35.03	5250.39
21.92	31.60	5250.35
23.77	29.27	5250.33

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 2.61 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.23	2.66	13.78	49.70
6.00	DISCHG	134.82	300.76	499.71	796.49	1002.01	1173.52	1275.53	1340.28	1328.92	1252.65
7.00	DISCHG	1130.61	911.21	576.70	395.04	293.28	250.67	226.04	209.75	199.76	192.59
8.00	DISCHG	186.64	180.52	173.61	165.81	157.01	147.06	135.60	122.99	110.92	100.83
9.00	DISCHG	93.18	87.79	84.21	81.94	80.55	79.74	79.29	79.07	78.99	79.00
10.00	DISCHG	79.05	79.13	79.22	79.32	79.43	79.53	79.55	79.27	78.27	76.15
11.00	DISCHG	72.77	68.14	62.82	58.21	55.55	55.25	57.29	60.92	64.49	66.55
12.00	DISCHG	66.54	64.33	60.65	57.08	55.05	55.14	57.47	61.28	64.98	67.14
13.00	DISCHG	67.13	64.80	60.67	55.93	51.62	48.21	45.84	44.58	44.63	46.22
14.00	DISCHG	49.35	53.95	59.39	64.17	66.97	67.36	65.24	61.19	56.48	52.17
15.00	DISCHG	48.75	46.26	44.56	43.46	42.77	42.34	42.09	41.96	41.89	41.85
16.00	DISCHG	41.85	41.85	41.87	41.88	41.91	41.93	41.95	41.98	42.00	42.03
17.00	DISCHG	42.05	42.07	42.10	42.12	42.15	42.17	42.19	42.22	42.24	42.27
18.00	DISCHG	42.29	42.31	42.34	42.36	42.38	42.41	42.43	42.45	42.48	42.50
19.00	DISCHG	42.52	42.50	42.35	41.89	40.97	39.51	37.45	34.91	32.23	29.66
20.00	DISCHG	27.32	25.22	23.48	22.47	22.52	23.74	26.09	29.17	32.12	34.17
21.00	DISCHG	35.01	34.65	33.41	31.92	30.77	30.19	30.23	30.72	31.28	31.59
22.00	DISCHG	31.48	30.93	30.02	29.01	28.10	27.38	26.86	26.50	26.28	26.13
23.00	DISCHG	26.05	26.02	26.08	26.28	26.71	27.38	28.23	29.02	29.23	28.38
24.00	DISCHG	26.26	22.83	18.42	13.88	9.93	6.83	4.56	2.96	1.88	1.17
25.00	DISCHG	.71	.42	.24	.14	.07	.04	.02	.00		

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	291.08	(RUNOFF)
10.43	12.76	(RUNOFF)
11.64	11.37	(RUNOFF)
12.65	11.46	(RUNOFF)
14.15	11.46	(RUNOFF)
18.89	6.81	(RUNOFF)
20.69	5.89	(RUNOFF)
21.64	5.19	(RUNOFF)
23.56	4.95	(RUNOFF)

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
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OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	224.31	5605.47
10.56	12.75	5600.70
11.85	10.69	5600.62
12.85	10.71	5600.63
14.38	10.54	5600.62
19.05	6.80	5600.41
23.72	4.71	5600.28

OPERATION RESVOR STRUCTURE 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.62	207.10	5608.85
10.57	12.74	5600.98
11.86	10.69	5600.82
12.87	10.71	5600.82
14.40	10.54	5600.81
19.06	6.80	5600.52
23.74	4.71	5600.36

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .41 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.09	1.31	7.75
6.00	DISCHG	26.78	59.05	104.84	152.18	179.84	198.42	206.83	203.49	190.30	167.86
7.00	DISCHG	131.25	99.50	82.82	66.20	56.91	49.39	44.04	40.03	36.99	34.50
8.00	DISCHG	32.37	30.56	29.01	27.53	25.84	23.65	21.75	19.71	18.06	16.67
9.00	DISCHG	15.60	14.77	14.16	13.70	13.38	13.14	12.98	12.87	12.80	12.75
10.00	DISCHG	12.72	12.71	12.71	12.71	12.72	12.74	12.74	12.71	12.53	12.11
11.00	DISCHG	11.44	10.63	9.83	9.28	9.10	9.30	9.75	10.27	10.62	10.66
12.00	DISCHG	10.36	9.85	9.29	8.90	8.85	9.14	9.66	10.22	10.63	10.70
13.00	DISCHG	10.42	9.91	9.30	8.72	8.22	7.82	7.50	7.30	7.32	7.64
14.00	DISCHG	8.25	9.04	9.81	10.36	10.54	10.34	9.88	9.31	8.75	8.27
15.00	DISCHG	7.88	7.57	7.33	7.15	7.01	6.92	6.85	6.80	6.76	6.74
16.00	DISCHG	6.72	6.72	6.71	6.71	6.71	6.71	6.71	6.71	6.72	6.72
17.00	DISCHG	6.72	6.73	6.73	6.74	6.74	6.74	6.75	6.75	6.75	6.76
18.00	DISCHG	6.76	6.77	6.77	6.77	6.78	6.78	6.78	6.79	6.79	6.79
19.00	DISCHG	6.80	6.80	6.78	6.70	6.52	6.23	5.88	5.52	5.15	4.79
20.00	DISCHG	4.43	4.10	3.82	3.69	3.77	4.05	4.46	4.90	5.24	5.41
21.00	DISCHG	5.40	5.28	5.10	4.95	4.87	4.87	4.93	5.01	5.07	5.06
22.00	DISCHG	4.99	4.87	4.73	4.60	4.49	4.40	4.34	4.28	4.24	4.22
23.00	DISCHG	4.20	4.18	4.18	4.21	4.29	4.42	4.58	4.70	4.69	4.45
24.00	DISCHG	3.99	3.39	2.75	2.17	1.67	1.27	.94	.69	.50	.36
25.00	DISCHG	.26	.18	.13	.09	.06	.04	.02	.02	.01	.01

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
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OPERATION REACH CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.84	193.43	5464.63
10.68	12.74	5460.59
12.04	10.43	5460.51

13.06	10.43	5460.51
14.60	10.17	5460.51
19.17	6.80	5460.34
23.89	4.61	5460.23

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	539.39	(RUNOFF)
10.38	12.49	(RUNOFF)
11.52	12.01	(RUNOFF)
12.52	12.09	(RUNOFF)
14.02	12.11	(RUNOFF)
18.88	6.40	(RUNOFF)
20.54	6.11	(RUNOFF)
21.52	5.04	(RUNOFF)
23.47	4.93	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	550.57	5468.26
6.69	237.39	5465.07
11.47	21.65	5460.88
12.51	21.21	5460.86
14.06	19.83	5460.82
18.94	13.19	5460.60
21.46	10.03	5460.50
23.48	9.16	5460.46

OPERATION ADDHYD CROSS SECTION 18

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TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
 PAGE

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.73	1581.92	5489.36
10.47	104.76	5481.42
11.93	84.17	5481.18
12.93	84.74	5481.19
14.46	84.46	5481.18
18.96	55.73	5480.78
21.03	44.22	5480.63
21.89	40.67	5480.58
23.61	37.11	5480.54

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 6 BY 577.6 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.90	1540.81	5332.41

10.58	104.67	5322.03
12.08	83.46	5321.64
13.08	83.96	5321.65
14.62	83.24	5321.63
19.07	55.70	5321.03
21.21	43.59	5320.80
22.02	40.59	5320.76
23.76	36.75	5320.70

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	466.29	(RUNOFF)
10.45	15.81	(RUNOFF)
11.58	14.60	(RUNOFF)
12.58	14.71	(RUNOFF)
14.09	14.78	(RUNOFF)
18.89	8.29	(RUNOFF)
20.61	7.54	(RUNOFF)
21.58	6.43	(RUNOFF)
23.51	6.19	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.88	1603.87	5332.89
10.48	120.36	5322.13
12.09	92.79	5321.84
13.03	93.14	5321.85
14.59	92.36	5321.83
18.97	63.96	5321.21
21.24	49.20	5320.89
23.62	42.12	5320.78

OPERATION RESVOR STRUCTURE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.88	1604.94	5354.65
10.46	120.33	5350.51
12.08	92.77	5350.40
13.03	93.14	5350.40
14.59	92.36	5350.39
18.97	63.96	5350.27
21.24	49.20	5350.21
23.62	42.11	5350.18

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.77 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00	1.30	24.78	124.22	336.64
6.00	DISCHG	626.97 934.54 1153.97 1222.04 1264.83 1325.84 1423.02	1517.17	1583.47	1603.78	

7.00	DISCHG	1558.82	1464.05	1283.69	998.12	755.79	583.51	474.30	406.20	360.99	329.85
8.00	DISCHG	308.80	292.74	278.32	261.97	245.57	229.98	215.86	201.37	186.80	172.14
9.00	DISCHG	159.17	148.06	139.60	133.11	128.68	125.44	123.45	121.99	121.22	120.61
10.00	DISCHG	120.40	120.18	120.21	120.16	120.30	120.32	120.16	118.78	115.89	112.00
11.00	DISCHG	107.99	104.00	100.42	97.56	95.32	93.50	92.50	92.13	92.06	92.24
12.00	DISCHG	92.68	92.77	92.59	92.32	91.98	91.46	91.40	91.64	92.01	92.49
13.00	DISCHG	93.10	92.97	91.40	88.05	83.64	78.96	75.04	73.02	73.46	75.52
14.00	DISCHG	78.42	81.64	84.84	87.49	89.78	91.57	92.36	91.29	88.31	84.07
15.00	DISCHG	79.50	75.29	71.80	69.12	67.16	65.78	64.84	64.20	63.79	63.53
16.00	DISCHG	63.37	63.27	63.22	63.19	63.18	63.19	63.21	63.23	63.26	63.28
17.00	DISCHG	63.31	63.34	63.38	63.41	63.44	63.47	63.51	63.54	63.57	63.60
18.00	DISCHG	63.64	63.67	63.70	63.74	63.77	63.80	63.83	63.86	63.90	63.93
19.00	DISCHG	63.95	63.84	63.28	62.02	60.38	58.65	56.74	54.27	51.09	47.56
20.00	DISCHG	44.16	41.24	39.33	38.65	38.84	39.51	40.62	42.11	43.82	45.64
21.00	DISCHG	47.33	48.57	49.14	49.10	48.57	47.85	47.18	46.68	46.30	46.08
22.00	DISCHG	45.95	45.76	45.29	44.51	43.53	42.51	41.59	40.84	40.27	39.85
23.00	DISCHG	39.57	39.44	39.58	40.08	40.78	41.52	42.09	41.88	40.60	38.66
24.00	DISCHG	36.47	33.88	30.44	26.04	21.17	16.44	12.31	8.95	6.36	4.43
25.00	DISCHG	3.04	2.06	1.39	.92	.61	.40	.26	.17	.11	.07
26.00	DISCHG	.04	.03	.02	.01	.00					

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
PAGE 1

OPERATION RESVOR STRUCTURE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	1605.86	5345.43
9.66	123.06	5340.55
9.89	121.39	5340.54
10.10	120.86	5340.54
10.30	120.77	5340.54
10.50	120.87	5340.54
12.27	92.59	5340.41
13.06	93.30	5340.41
14.59	92.29	5340.41
18.96	63.95	5340.28

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00	1.26	24.19 122.17 333.03
6.00	DISCHG 615.77 924.03 1146.22 1223.01 1260.54 1324.48 1416.28	1515.18 1579.76 1605.24	
7.00	DISCHG 1561.24 1469.71 1293.57 1013.00 759.02 592.03 474.08	409.21 359.32 332.24	
8.00	DISCHG 307.08 294.79 276.75 263.88 244.19 231.70 214.60	202.94 185.69 173.58	
9.00	DISCHG 158.15 149.32 138.63 134.19 127.76 126.39 122.60	122.83 120.44 121.36	
10.00	DISCHG 119.69 120.86 119.57 120.77 119.71 120.87 119.64	119.31 115.46 112.50	
11.00	DISCHG 107.62 104.45 100.08 97.96 95.00 93.85 92.19	92.43 91.78 92.50	
12.00	DISCHG 92.42 93.01 92.37 92.55 91.78 91.66 91.21	91.81 91.83 92.64	
13.00	DISCHG 92.94 93.13 91.29 88.24 83.58 79.14 74.97	73.14 73.34 75.59	
14.00	DISCHG 78.28 81.68 84.71 87.54 89.68 91.63 92.28	91.38 88.29 84.19	
15.00	DISCHG 79.50 75.40 71.79 69.20 67.13 65.84 64.80	64.25 63.76 63.57	
16.00	DISCHG 63.33 63.30 63.18 63.22 63.15 63.22 63.18	63.25 63.23 63.31	
17.00	DISCHG 63.29 63.36 63.36 63.43 63.43 63.49 63.49	63.55 63.56 63.62	
18.00	DISCHG 63.63 63.68 63.69 63.75 63.76 63.81 63.82	63.87 63.89 63.94	
19.00	DISCHG 63.94 63.85 63.28 62.05 60.39 58.68 56.76	54.31 51.14 47.62	

20.00	DISCHG	44.20	41.28	39.35	38.66	38.83	39.50	40.60	42.09	43.79	45.62
21.00	DISCHG	47.31	48.56	49.14	49.10	48.58	47.86	47.18	46.68	46.30	46.08
22.00	DISCHG	45.95	45.76	45.30	44.53	43.54	42.52	41.61	40.85	40.28	39.86
23.00	DISCHG	39.57	39.44	39.58	40.07	40.77	41.51	42.09	41.90	40.63	38.68
24.00	DISCHG	36.50	33.92	30.49	26.11	21.23	16.50	12.36	8.99	6.39	4.46
25.00	DISCHG	3.05	2.08	1.39	.93	.61	.40	.26	.17	.11	.07
26.00	DISCHG	.04	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 33

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	1605.70	5325.43
10.49	120.41	5320.60
12.17	92.78	5320.46
13.02	93.26	5320.47
14.60	92.45	5320.46
18.98	63.98	5320.32
21.24	49.20	5320.25
23.63	42.11	5320.21

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 1.23	23.56 119.90 328.98	
6.00	DISCHG 604.48 915.27 1137.39 1224.18 1256.52 1322.67 1410.35	1512.13 1577.08 1605.42	
7.00	DISCHG 1564.66 1474.27 1304.04 1026.99 762.73 598.89 475.20	412.16 358.41 333.89	
8.00	DISCHG 306.26 295.92 276.22 264.75 243.94 232.30 214.54	203.34 185.82 173.81	
9.00	DISCHG 158.38 149.36 138.91 134.07 128.07 126.14 122.95	122.50 120.82 120.97	
10.00	DISCHG 120.10 120.43 120.01 120.33 120.17 120.41 120.11	118.88 115.98 112.10	
11.00	DISCHG 108.14 104.06 100.58 97.55 95.48 93.43 92.63	92.01 92.19 92.09	
12.00	DISCHG 92.81 92.63 92.75 92.18 92.14 91.32 91.54	91.48 92.14 92.33	
13.00	DISCHG 93.23 92.85 91.60 88.03 83.91 78.96 75.27	72.91 73.54 75.33	
14.00	DISCHG 78.44 81.43 84.86 87.32 89.82 91.43 92.45	91.25 88.51 84.11	
15.00	DISCHG 79.71 75.32 71.97 69.11 67.28 65.73 64.93	64.15 63.87 63.47	
16.00	DISCHG 63.43 63.21 63.28 63.13 63.24 63.13 63.26	63.18 63.30 63.24	
17.00	DISCHG 63.36 63.30 63.42 63.37 63.48 63.44 63.54	63.50 63.61 63.57	
18.00	DISCHG 63.67 63.64 63.73 63.71 63.79 63.77 63.86	63.84 63.92 63.91	
19.00	DISCHG 63.97 63.83 63.32 62.05 60.44 58.69 56.81	54.34 51.21 47.65	
20.00	DISCHG 44.26 41.30 39.38 38.65 38.84 39.47 40.59	42.05 43.77 45.58	
21.00	DISCHG 47.30 48.54 49.14 49.10 48.60 47.87 47.20	46.68 46.31 46.07	
22.00	DISCHG 45.96 45.76 45.32 44.53 43.56 42.53 41.62	40.86 40.29 39.86	
23.00	DISCHG 39.58 39.43 39.58 40.06 40.77 41.50 42.08	41.90 40.66 38.71	
24.00	DISCHG 36.54 33.96 30.55 26.18 21.31 16.57 12.42	9.03 6.42 4.48	
25.00	DISCHG 3.07 2.09 1.40 .93 .62 .41 .27	.17 .11 .07	
26.00	DISCHG .04 .03 .02 .01 .00		

OPERATION RESVOR STRUCTURE 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	1604.77	5316.48
9.56	125.06	5310.66
9.78	122.47	5310.64

10.00	121.57	5310.64
10.20	121.35	5310.64
10.40	121.39	5310.64
10.59	121.27	5310.64
11.57	93.38	5310.49
12.01	93.32	5310.49
13.01	93.48	5310.49

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
PAGE 1

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	1.20	23.03	118.00	325.58
6.00	DISCHG	590.41	905.99	1130.68	1224.24	1254.32	1320.17	1406.69	1508.70	1575.84	1604.65
7.00	DISCHG	1567.97	1477.26	1312.64	1037.94	770.80	603.55	479.99	412.53	361.01	332.03
8.00	DISCHG	308.72	293.85	278.69	262.70	246.41	230.25	216.93	201.34	188.16	171.89
9.00	DISCHG	160.59	147.49	140.95	132.25	129.95	124.40	124.68	120.87	122.42	119.45
10.00	DISCHG	121.57	119.03	121.35	119.04	121.39	119.24	121.23	117.85	117.03	111.20
11.00	DISCHG	109.09	103.25	101.44	96.81	96.23	92.77	93.28	91.41	92.76	91.55
12.00	DISCHG	93.30	92.17	93.18	91.78	92.52	90.98	91.86	91.18	92.41	92.06
13.00	DISCHG	93.46	92.65	91.83	87.91	84.13	78.87	75.44	72.81	73.63	75.20
14.00	DISCHG	78.49	81.31	84.89	87.23	89.84	91.37	92.48	91.26	88.57	84.16
15.00	DISCHG	79.78	75.36	72.01	69.14	67.30	65.76	64.92	64.17	63.85	63.49
16.00	DISCHG	63.41	63.24	63.25	63.16	63.21	63.17	63.22	63.21	63.27	63.27
17.00	DISCHG	63.32	63.34	63.38	63.41	63.44	63.47	63.50	63.54	63.57	63.61
18.00	DISCHG	63.63	63.68	63.69	63.74	63.76	63.81	63.82	63.87	63.88	63.94
19.00	DISCHG	63.94	63.86	63.30	62.10	60.43	58.74	56.81	54.40	51.22	47.72
20.00	DISCHG	44.28	41.36	39.37	38.67	38.81	39.48	40.55	42.05	43.73	45.58
21.00	DISCHG	47.26	48.55	49.12	49.12	48.59	47.89	47.19	46.70	46.30	46.09
22.00	DISCHG	45.95	45.77	45.31	44.56	43.56	42.56	41.62	40.88	40.28	39.87
23.00	DISCHG	39.57	39.44	39.56	40.06	40.75	41.50	42.07	41.92	40.67	38.75
24.00	DISCHG	36.56	34.01	30.59	26.25	21.37	16.63	12.46	9.08	6.45	4.51
25.00	DISCHG	3.08	2.10	1.41	.94	.62	.41	.27	.18	.11	.07
26.00	DISCHG	.04	.03	.01	.01	.00					

OPERATION RESVOR STRUCTURE 31

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.90	1601.98	5305.42
9.36	132.40	5300.53
9.58	126.31	5300.51
9.79	123.71	5300.49
10.00	122.66	5300.49
10.20	122.26	5300.49
10.40	122.15	5300.49
10.59	121.88	5300.49
10.75	118.32	5300.47
11.58	93.49	5300.37

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	1.17	22.64	116.58	323.01
6.00	DISCHG	584.63	893.81	1129.68	1220.33	1256.29	1315.03	1406.86	1503.31	1577.23	1601.93
7.00	DISCHG	1572.30	1478.03	1320.40	1045.07	778.94	605.49	484.48	409.49	364.92	328.83
8.00	DISCHG	312.25	290.73	281.97	259.85	249.47	227.62	219.72	198.96	190.70	169.75

9.00	DISCHG	162.86	145.55	142.94	130.50	131.67	122.85	126.17	119.51	123.69	118.28
10.00	DISCHG	122.65	118.03	122.26	118.21	122.15	118.55	121.86	117.31	117.57	110.79
11.00	DISCHG	109.52	102.95	101.76	96.59	96.45	92.62	93.42	91.31	92.83	91.51
12.00	DISCHG	93.31	92.18	93.15	91.84	92.45	91.08	91.75	91.30	92.27	92.20

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TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 1
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT PAGE 14

13.00	DISCHG	93.30	92.82	91.68	88.12	84.00	79.10	75.29	73.01	73.42	75.37
14.00	DISCHG	78.26	81.48	84.66	87.41	89.63	91.55	92.28	91.47	88.42	84.39
15.00	DISCHG	79.64	75.58	71.87	69.33	67.15	65.94	64.77	64.33	63.71	63.64
16.00	DISCHG	63.27	63.38	63.11	63.29	63.08	63.29	63.10	63.33	63.16	63.38
17.00	DISCHG	63.22	63.44	63.28	63.50	63.35	63.56	63.42	63.62	63.49	63.68
18.00	DISCHG	63.56	63.74	63.63	63.80	63.70	63.87	63.77	63.92	63.83	63.99
19.00	DISCHG	63.89	63.91	63.27	62.15	60.41	58.79	56.80	54.46	51.23	47.79
20.00	DISCHG	44.29	41.41	39.36	38.70	38.78	39.50	40.52	42.05	43.70	45.57
21.00	DISCHG	47.23	48.55	49.11	49.13	48.59	47.91	47.19	46.71	46.30	46.10
22.00	DISCHG	45.94	45.78	45.31	44.57	43.57	42.57	41.63	40.89	40.29	39.88
23.00	DISCHG	39.57	39.45	39.56	40.05	40.74	41.49	42.06	41.93	40.69	38.77
24.00	DISCHG	36.58	34.03	30.63	26.29	21.41	16.68	12.50	9.11	6.47	4.52
25.00	DISCHG	3.10	2.11	1.41	.94	.62	.41	.27	.18	.11	.07
26.00	DISCHG	.04	.03	.02	.01	.00					

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	374.84	(RUNOFF)
10.43	16.32	(RUNOFF)
11.64	14.65	(RUNOFF)
12.64	14.77	(RUNOFF)
14.14	14.82	(RUNOFF)
18.90	8.73	(RUNOFF)
20.67	7.61	(RUNOFF)
21.63	6.69	(RUNOFF)
23.55	6.40	(RUNOFF)

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	298.95	5325.39
10.56	16.30	5320.56
11.83	13.86	5320.50
12.83	13.94	5320.50
14.35	13.79	5320.49
19.05	8.73	5320.35
21.81	6.54	5320.26
23.71	6.12	5320.25

OPERATION RESVOR STRUCTURE 45

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	298.95	5343.37
10.58	16.31	5340.24
11.83	13.86	5340.21
12.83	13.94	5340.21
14.35	13.78	5340.20
19.05	8.73	5340.13
21.81	6.54	5340.10
23.71	6.12	5340.09

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.16	2.41	12.78
6.00	DISCHG	43.03	101.00	177.92	252.55	294.06	296.43	269.96	230.23	190.75	155.46
7.00	DISCHG	125.86	102.14	84.42	70.69	61.23	54.06	49.40	45.66	43.11	40.57
8.00	DISCHG	38.65	36.72	35.26	33.38	31.32	28.63	26.07	23.52	21.62	19.98
9.00	DISCHG	18.90	17.97	17.44	16.95	16.72	16.47	16.39	16.26	16.26	16.20
10.00	DISCHG	16.23	16.20	16.25	16.23	16.28	16.27	16.31	16.21	15.92	15.19
11.00	DISCHG	14.19	13.00	11.99	11.39	11.39	11.88	12.67	13.41	13.84	13.71
12.00	DISCHG	13.14	12.30	11.52	11.10	11.23	11.82	12.67	13.46	13.92	13.81
13.00	DISCHG	13.24	12.41	11.53	10.76	10.14	9.66	9.31	9.15	9.32	9.94
14.00	DISCHG	10.93	12.08	13.12	13.71	13.72	13.22	12.44	11.59	10.84	10.23
15.00	DISCHG	9.76	9.41	9.15	8.97	8.84	8.75	8.69	8.65	8.62	8.60
16.00	DISCHG	8.59	8.59	8.59	8.59	8.59	8.60	8.60	8.61	8.61	8.62
17.00	DISCHG	8.62	8.63	8.63	8.64	8.64	8.65	8.65	8.66	8.66	8.67
18.00	DISCHG	8.67	8.68	8.68	8.69	8.69	8.70	8.70	8.71	8.71	8.72
19.00	DISCHG	8.72	8.72	8.69	8.55	8.24	7.80	7.30	6.80	6.33	5.85
20.00	DISCHG	5.39	4.97	4.66	4.59	4.82	5.33	5.97	6.57	6.97	7.10
21.00	DISCHG	6.99	6.74	6.46	6.26	6.19	6.24	6.36	6.48	6.54	6.50
22.00	DISCHG	6.36	6.17	5.98	5.81	5.68	5.58	5.50	5.44	5.40	5.38
23.00	DISCHG	5.36	5.35	5.36	5.42	5.56	5.76	5.98	6.12	6.03	5.58
24.00	DISCHG	4.84	3.95	3.07	2.33	1.73	1.26	.90	.64	.44	.31
25.00	DISCHG	.21	.14	.09	.06	.04	.02	.01	.01	.00	

OPERATION RESVOR STRUCTURE 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	299.09	5343.57
10.52	16.31	5340.29
11.83	13.85	5340.25
12.84	13.93	5340.25
14.35	13.78	5340.25
19.05	8.73	5340.16
21.81	6.54	5340.12
23.71	6.12	5340.11

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.15	2.32	12.43

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
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6.00	DISCHG	42.09	99.45	175.08	250.77	293.24	297.01	270.96	231.63	191.79	156.57
7.00	DISCHG	126.57	102.71	84.62	71.07	61.27	54.32	49.36	45.86	43.04	40.74
8.00	DISCHG	38.58	36.87	35.18	33.53	31.27	28.79	26.03	23.66	21.57	20.10
9.00	DISCHG	18.84	18.06	17.37	17.03	16.65	16.53	16.33	16.32	16.21	16.25
10.00	DISCHG	16.18	16.25	16.20	16.27	16.24	16.31	16.27	16.25	15.90	15.24
11.00	DISCHG	14.18	13.05	11.99	11.42	11.36	11.89	12.63	13.42	13.82	13.73
12.00	DISCHG	13.14	12.33	11.52	11.12	11.21	11.81	12.63	13.45	13.90	13.83
13.00	DISCHG	13.25	12.44	11.54	10.78	10.15	9.67	9.31	9.16	9.31	9.92
14.00	DISCHG	10.90	12.05	13.10	13.71	13.72	13.24	12.45	11.61	10.85	10.24
15.00	DISCHG	9.77	9.41	9.15	8.97	8.84	8.75	8.69	8.65	8.62	8.60
16.00	DISCHG	8.59	8.59	8.59	8.59	8.59	8.60	8.60	8.61	8.61	8.62
17.00	DISCHG	8.62	8.63	8.63	8.64	8.64	8.65	8.65	8.66	8.66	8.67
18.00	DISCHG	8.67	8.68	8.68	8.69	8.69	8.70	8.70	8.71	8.71	8.72
19.00	DISCHG	8.72	8.72	8.69	8.55	8.25	7.81	7.31	6.81	6.34	5.86
20.00	DISCHG	5.40	4.97	4.66	4.58	4.82	5.32	5.95	6.56	6.97	7.10
21.00	DISCHG	6.99	6.74	6.47	6.26	6.19	6.23	6.35	6.48	6.54	6.50
22.00	DISCHG	6.37	6.18	5.99	5.82	5.68	5.58	5.50	5.44	5.41	5.38
23.00	DISCHG	5.36	5.35	5.36	5.42	5.55	5.76	5.98	6.12	6.04	5.60
24.00	DISCHG	4.85	3.97	3.09	2.35	1.74	1.27	.91	.64	.45	.31
25.00	DISCHG	.21	.14	.09	.06	.04	.02	.01	.01	.00	

OPERATION RESVOR STRUCTURE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	299.14	5325.15
10.57	16.31	5320.44
11.83	13.86	5320.37
12.84	13.94	5320.37
14.36	13.78	5320.37
19.05	8.73	5320.23
21.81	6.54	5320.17
23.72	6.12	5320.16

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.14	2.20	11.93
6.00	DISCHG	40.74	95.95	169.32	246.07	291.57	297.81	273.56	234.50	194.52	158.46
7.00	DISCHG	128.47	103.91	85.72	71.55	61.45	54.59	49.42	46.01	43.07	40.85
8.00	DISCHG	38.61	36.95	35.22	33.60	31.35	28.87	26.13	23.72	21.64	20.12
9.00	DISCHG	18.89	18.06	17.42	17.01	16.69	16.51	16.37	16.29	16.24	16.22
10.00	DISCHG	16.21	16.21	16.23	16.24	16.27	16.28	16.30	16.23	15.94	15.24
11.00	DISCHG	14.25	13.06	12.04	11.41	11.38	11.85	12.63	13.38	13.83	13.73
12.00	DISCHG	13.18	12.35	11.56	11.11	11.21	11.77	12.62	13.42	13.91	13.83
13.00	DISCHG	13.29	12.45	11.58	10.79	10.17	9.68	9.33	9.15	9.30	9.89
14.00	DISCHG	10.87	12.01	13.07	13.69	13.74	13.26	12.49	11.64	10.88	10.26
15.00	DISCHG	9.78	9.42	9.16	8.97	8.85	8.75	8.69	8.65	8.62	8.60
16.00	DISCHG	8.59	8.59	8.59	8.59	8.59	8.60	8.60	8.61	8.61	8.62
17.00	DISCHG	8.62	8.63	8.63	8.64	8.64	8.65	8.65	8.66	8.66	8.67
18.00	DISCHG	8.67	8.68	8.68	8.69	8.69	8.70	8.70	8.71	8.71	8.72

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
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19.00	DISCHG	8.72	8.72	8.69	8.56	8.26	7.83	7.33	6.83	6.35	5.88
20.00	DISCHG	5.42	4.99	4.67	4.58	4.80	5.30	5.93	6.54	6.96	7.10

21.00	DISCHG	7.00	6.75	6.47	6.27	6.19	6.23	6.35	6.48	6.54	6.50
22.00	DISCHG	6.37	6.19	5.99	5.82	5.69	5.58	5.50	5.45	5.41	5.38
23.00	DISCHG	5.36	5.35	5.36	5.41	5.55	5.75	5.97	6.12	6.05	5.62
24.00	DISCHG	4.88	4.00	3.12	2.37	1.76	1.28	.92	.65	.45	.31
25.00	DISCHG	.21	.14	.10	.06	.04	.02	.01	.01	.00	

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	196.37	(RUNOFF)
7.47	15.37	(RUNOFF)
10.44	6.54	(RUNOFF)
11.54	6.28	(RUNOFF)
12.54	6.36	(RUNOFF)
14.04	6.42	(RUNOFF)
18.95	3.51	(RUNOFF)
20.56	3.33	(RUNOFF)
23.48	2.70	(RUNOFF)

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	170.90	5349.58
10.55	6.55	5340.46
11.68	6.11	5340.43
12.68	6.20	5340.43
14.18	6.24	5340.44
19.05	3.51	5340.25
23.61	2.64	5340.19

OPERATION RESVOR STRUCTURE 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	171.23	5344.94
10.52	6.54	5340.21
11.68	6.11	5340.19
12.69	6.20	5340.20
14.19	6.24	5340.20
19.05	3.51	5340.11
23.62	2.64	5340.08

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.22 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00	.03	2.15	16.09	
6.00	DISCHG	52.19 107.93 159.68 169.93 139.05 98.93 68.78	49.41	36.41	28.01	

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 1
PAGE 1:

7.00	DISCHG	22.32	19.15	17.09	16.16	15.58	15.50	15.34	15.33	14.81	14.22
8.00	DISCHG	13.53	13.17	12.61	11.59	10.02	8.69	7.69	7.14	6.76	6.62
9.00	DISCHG	6.48	6.47	6.41	6.44	6.41	6.45	6.43	6.46	6.45	6.48
10.00	DISCHG	6.47	6.50	6.49	6.52	6.52	6.54	6.53	6.42	5.92	5.18
11.00	DISCHG	4.48	4.00	3.83	4.15	4.81	5.48	5.94	6.11	5.78	5.12

12.00	DISCHG	4.46	4.00	3.84	4.18	4.86	5.54	6.01	6.19	5.86	5.17
13.00	DISCHG	4.51	4.04	3.75	3.58	3.49	3.43	3.41	3.52	4.03	4.82
14.00	DISCHG	5.55	6.05	6.24	5.92	5.24	4.57	4.10	3.80	3.63	3.53
15.00	DISCHG	3.48	3.45	3.43	3.43	3.43	3.43	3.43	3.43	3.43	3.44
16.00	DISCHG	3.44	3.44	3.44	3.44	3.45	3.45	3.45	3.45	3.45	3.46
17.00	DISCHG	3.46	3.46	3.46	3.47	3.47	3.47	3.47	3.47	3.47	3.48
18.00	DISCHG	3.48	3.48	3.48	3.49	3.49	3.49	3.49	3.49	3.50	3.50
19.00	DISCHG	3.50	3.50	3.45	3.24	2.91	2.61	2.40	2.25	2.07	1.86
20.00	DISCHG	1.69	1.57	1.58	1.86	2.33	2.77	3.08	3.21	3.12	2.86
21.00	DISCHG	2.59	2.40	2.31	2.35	2.47	2.60	2.69	2.72	2.65	2.51
22.00	DISCHG	2.37	2.27	2.21	2.17	2.15	2.14	2.14	2.13	2.13	2.13
23.00	DISCHG	2.13	2.14	2.16	2.26	2.41	2.55	2.64	2.59	2.22	1.61
24.00	DISCHG	1.04	.64	.39	.24	.14	.08	.04	.02	.01	.00

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	564.65	(RUNOFF)
10.40	20.85	(RUNOFF)
11.66	18.40	(RUNOFF)
12.65	18.49	(RUNOFF)
14.16	18.40	(RUNOFF)
18.87	10.87	(RUNOFF)
20.69	9.33	(RUNOFF)
21.64	8.26	(RUNOFF)
23.56	7.84	(RUNOFF)

*** WARNING REACH 22 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	560.17	5465.53
10.50	20.85	5460.62
11.76	18.36	5460.57
12.76	18.44	5460.57
14.27	18.35	5460.57
18.98	10.87	5460.42
20.80	9.31	5460.37
21.75	8.25	5460.33
23.66	7.82	5460.31

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
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OPERATION RESVOR STRUCTURE 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	555.92	5256.39
10.51	20.85	5250.43
11.77	18.36	5250.38
12.77	18.44	5250.38

14.27	18.35	5250.38
18.98	10.87	5250.23
20.81	9.31	5250.19
21.75	8.25	5250.17
23.67	7.82	5250.16

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .56 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	1.94	18.31	69.50
6.00	DISCHG	163.74	302.54	437.71	542.98	550.27	486.18	382.42	287.32	205.87	167.09
7.00	DISCHG	126.18	104.90	83.77	74.89	65.14	61.65	56.75	55.34	51.98	50.10
8.00	DISCHG	46.86	45.23	42.96	40.91	37.24	33.52	29.63	26.82	24.64	23.38
9.00	DISCHG	22.37	21.85	21.40	21.18	20.97	20.89	20.80	20.79	20.75	20.76
10.00	DISCHG	20.75	20.77	20.78	20.81	20.82	20.85	20.83	20.61	19.89	18.50
11.00	DISCHG	16.71	15.00	13.79	13.50	14.27	15.65	17.09	18.12	18.30	17.44
12.00	DISCHG	16.01	14.55	13.49	13.33	14.20	15.65	17.13	18.23	18.38	17.53
13.00	DISCHG	16.11	14.60	13.30	12.42	11.84	11.44	11.19	11.23	11.89	13.27
14.00	DISCHG	15.07	16.84	18.08	18.32	17.52	16.13	14.62	13.36	12.49	11.91
15.00	DISCHG	11.52	11.26	11.09	10.97	10.90	10.85	10.81	10.79	10.77	10.76
16.00	DISCHG	10.76	10.76	10.76	10.76	10.77	10.77	10.78	10.78	10.78	10.79
17.00	DISCHG	10.79	10.80	10.80	10.80	10.81	10.81	10.82	10.82	10.82	10.83
18.00	DISCHG	10.83	10.83	10.84	10.84	10.85	10.85	10.85	10.86	10.86	10.87
19.00	DISCHG	10.87	10.86	10.77	10.47	9.88	9.13	8.40	7.75	7.17	6.60
20.00	DISCHG	6.04	5.57	5.31	5.51	6.23	7.24	8.26	9.04	9.31	9.10
21.00	DISCHG	8.62	8.06	7.62	7.44	7.53	7.76	8.03	8.22	8.23	8.04
22.00	DISCHG	7.73	7.41	7.14	6.95	6.83	6.75	6.69	6.66	6.63	6.62
23.00	DISCHG	6.61	6.60	6.64	6.78	7.05	7.39	7.71	7.79	7.39	6.39
24.00	DISCHG	5.03	3.68	2.57	1.77	1.22	.83	.57	.38	.25	.17
25.00	DISCHG	.11	.07	.04	.03	.01	.01	.00			

OPERATION REACH CROSS SECTION 10

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
PAGE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	487.19	5328.16
10.65	20.84	5320.95
11.94	17.65	5320.85
12.94	17.70	5320.85
14.46	17.48	5320.84
19.11	10.87	5320.63
21.01	8.88	5320.53
21.92	8.12	5320.49
23.82	7.58	5320.46

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	524.55	(RUNOFF)
10.39	14.20	(RUNOFF)
11.57	13.28	(RUNOFF)
12.57	13.33	(RUNOFF)
14.07	13.40	(RUNOFF)

18.87	7.31	(RUNOFF)
20.59	6.75	(RUNOFF)
21.56	5.69	(RUNOFF)
23.50	5.49	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	688.97	5330.60
10.44	34.99	5321.41
11.66	28.32	5321.20
12.68	28.31	5321.20
14.22	27.58	5321.17
18.91	18.17	5320.87
21.61	13.37	5320.71
23.56	12.47	5320.68

OPERATION RESVOR STRUCTURE 97

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.00	281.09	5349.05
14.50	25.80	5341.17
21.09	13.55	5340.62
23.67	11.95	5340.54

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = .91 SQ.MI.

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 1
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5.00	DISCHG	.00	.00	.00	.00	.00	.00	.39	3.37	13.68	36.50
6.00	DISCHG	65.42	102.17	140.10	169.36	196.43	224.84	249.77	266.21	275.06	279.80
7.00	DISCHG	281.09	279.82	276.61	272.05	266.60	260.63	251.55	242.15	232.87	223.72
8.00	DISCHG	214.82	206.22	198.19	191.25	184.38	177.61	170.95	164.42	158.04	151.82
9.00	DISCHG	145.81	140.02	134.46	128.82	121.69	115.08	108.95	103.29	98.04	93.20
10.00	DISCHG	88.72	84.59	80.77	77.25	74.00	71.00	68.22	65.59	63.05	60.57
11.00	DISCHG	58.12	55.74	53.46	51.35	49.42	47.70	46.17	44.79	43.29	41.54
12.00	DISCHG	39.88	38.30	36.84	35.56	34.50	33.65	33.00	32.47	31.99	31.48
13.00	DISCHG	30.93	30.33	29.64	28.89	28.08	27.25	26.45	25.76	25.27	25.01
14.00	DISCHG	24.97	25.11	25.35	25.58	25.74	25.80	25.75	25.57	25.26	24.86
15.00	DISCHG	24.39	23.89	23.38	22.89	22.42	21.98	21.57	21.20	20.86	20.56
16.00	DISCHG	20.28	20.04	19.82	19.62	19.45	19.29	19.15	19.03	18.92	18.83
17.00	DISCHG	18.74	18.67	18.60	18.55	18.49	18.45	18.41	18.38	18.35	18.32
18.00	DISCHG	18.30	18.28	18.26	18.25	18.24	18.23	18.22	18.21	18.20	18.20
19.00	DISCHG	18.20	18.19	18.14	18.03	17.85	17.60	17.30	16.92	16.47	15.96
20.00	DISCHG	15.41	14.85	14.33	13.90	13.61	13.44	13.38	13.39	13.44	13.50
21.00	DISCHG	13.54	13.55	13.53	13.51	13.48	13.45	13.44	13.43	13.41	13.37
22.00	DISCHG	13.32	13.24	13.14	13.02	12.88	12.73	12.59	12.44	12.30	12.17
23.00	DISCHG	12.06	11.95	11.87	11.83	11.83	11.87	11.93	11.95	11.87	11.67
24.00	DISCHG	11.35	10.92	10.39	9.77	9.09	8.38	7.67	6.98	6.31	5.69
25.00	DISCHG	5.12	4.59	4.11	3.67	3.28	2.93	2.61	2.33	2.07	1.85
26.00	DISCHG	1.64	1.46	1.30	1.16	1.03	.92	.82	.73	.65	.58
27.00	DISCHG	.52	.46	.41	.36	.32	.29	.26	.23	.20	.18
28.00	DISCHG	.16	.14	.13	.11	.10	.09	.08	.07	.06	.06

29.00	DISCHG	.05	.05	.04	.04	.03	.03	.03	.02	.02	.02
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OPERATION RESVOR STRUCTURE 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.07	280.39	5324.10
14.55	25.79	5320.49
21.14	13.55	5320.26
23.71	11.94	5320.23

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .91 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .19	1.86 8.47 24.95	
6.00	DISCHG 50.75 83.52 125.03 160.14 186.51 214.88 241.61 259.99 271.37 277.12		
7.00	DISCHG 279.77 280.32 278.64 275.21 269.00 263.24 255.60 245.82 235.91 226.83		
8.00	DISCHG 217.82 209.11 200.88 193.72 186.88 180.06 173.36 166.78 160.35 154.07		
9.00	DISCHG 147.92 141.95 136.34 130.74 124.20 117.27 111.01 105.18 99.83 95.65		
10.00	DISCHG 91.00 86.69 82.71 79.04 75.65 72.52 69.63 66.93 64.35 61.83		
11.00	DISCHG 59.36 56.95 54.62 52.42 50.40 48.58 46.95 45.49 44.05 42.43		
12.00	DISCHG 40.72 39.10 37.58 36.21 35.04 34.08 33.33 32.74 32.23 31.74		
13.00	DISCHG 31.21 30.63 29.99 29.27 28.49 27.67 26.86 26.11 25.52 25.14		
14.00	DISCHG 24.99 25.04 25.23 25.46 25.66 25.77 25.77 25.66 25.42 25.06		
15.00	DISCHG 24.63 24.14 23.64 23.14 22.66 22.20 21.78 21.39 21.03 20.71		
16.00	DISCHG 20.42 20.16 19.93 19.72 19.54 19.37 19.22 19.09 18.98 18.88		
17.00	DISCHG 18.79 18.71 18.64 18.58 18.52 18.47 18.43 18.39 18.36 18.33		

1

TR20 XEQ 03-26-99 09:06	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT	PAGE	22

18.00	DISCHG	18.31	18.29	18.27	18.25	18.24	18.23	18.22	18.21	18.21	18.20
19.00	DISCHG	18.20	18.19	18.16	18.09	17.94	17.73	17.45	17.11	16.70	16.22
20.00	DISCHG	15.69	15.13	14.59	14.12	13.76	13.52	13.41	13.38	13.42	13.47
21.00	DISCHG	13.52	13.54	13.54	13.52	13.49	13.46	13.45	13.43	13.42	13.39
22.00	DISCHG	13.34	13.28	13.19	13.08	12.95	12.81	12.66	12.51	12.37	12.24
23.00	DISCHG	12.12	12.00	11.91	11.85	11.83	11.85	11.90	11.94	11.91	11.77
24.00	DISCHG	11.51	11.14	10.66	10.09	9.44	8.74	8.03	7.33	6.65	6.01
25.00	DISCHG	5.41	4.86	4.35	3.89	3.48	3.11	2.77	2.47	2.20	1.96
26.00	DISCHG	1.75	1.56	1.39	1.23	1.10	.98	.87	.78	.69	.62
27.00	DISCHG	.55	.49	.43	.39	.34	.31	.27	.24	.22	.19
28.00	DISCHG	.17	.15	.14	.12	.11	.10	.09	.08	.07	.06
29.00	DISCHG	.05	.05	.04	.04	.03	.03	.03	.02	.02	.02

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.97	674.23	(RUNOFF)
7.44	29.25	(RUNOFF)
10.41	11.78	(RUNOFF)
11.46	11.90	(RUNOFF)
12.46	11.91	(RUNOFF)
13.96	11.92	(RUNOFF)
18.85	5.93	(RUNOFF)
20.46	5.96	(RUNOFF)
21.46	4.77	(RUNOFF)
23.45	4.76	(RUNOFF)

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 54

TO XSECTION 8

STARTING TIME = .00 RAIN DEPTH = 3.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 54

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	684.06	(RUNOFF)
7.46	45.93	(RUNOFF)
10.41	19.23	(RUNOFF)
11.52	18.64	(RUNOFF)
12.52	18.79	(RUNOFF)
14.02	18.99	(RUNOFF)
18.91	10.12	(RUNOFF)
20.53	9.71	(RUNOFF)
21.51	8.00	(RUNOFF)
23.47	7.86	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	318.40	(RUNOFF)
7.46	19.38	(RUNOFF)
10.40	8.04	(RUNOFF)
11.50	7.86	(RUNOFF)
12.50	7.91	(RUNOFF)
14.00	7.97	(RUNOFF)
18.88	4.20	(RUNOFF)
20.52	4.06	(RUNOFF)
23.46	3.28	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	1001.27	5729.91

7.46	65.31	5721.70
10.41	27.28	5720.79
11.51	26.49	5720.77
12.51	26.69	5720.78
14.01	26.95	5720.78
18.90	14.31	5720.50
20.53	13.77	5720.48
21.51	11.32	5720.43
23.47	11.14	5720.43

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

OPERATION REACH CROSS SECTION 44

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRGD : P3S1_OUT.TXT

JOB 1 PASS
 PAGE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	954.15	5729.51
7.56	65.27	5721.70
10.53	27.27	5720.79
11.64	26.21	5720.76
12.64	26.41	5720.77
14.14	26.66	5720.77
19.01	14.31	5720.50
20.65	13.67	5720.48
21.63	11.26	5720.43
23.58	11.04	5720.42

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	79.24	(RUNOFF)
7.47	7.50	(RUNOFF)
10.45	3.24	(RUNOFF)
11.56	3.08	(RUNOFF)
12.56	3.11	(RUNOFF)
14.07	3.16	(RUNOFF)
23.49	1.34	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1031.59	5730.17
7.55	72.76	5721.89
10.48	30.50	5720.86
11.63	29.22	5720.83
12.63	29.45	5720.84
14.13	29.76	5720.84
18.96	16.07	5720.54
20.65	15.23	5720.52
21.62	12.63	5720.46

23.57 12.36 5720.45

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 42 BY 31.6 CFS

*** WARNING REACH 42 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 42

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	995.64	5670.26
10.58	30.49	5660.91
11.75	28.98	5660.87
12.75	29.22	5660.88
14.25	29.51	5660.89
19.07	16.07	5660.55
20.76	15.14	5660.53
21.74	12.58	5660.46
23.68	12.27	5660.46

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	175.42	(RUNOFF)
10.45	7.16	(RUNOFF)
11.58	6.68	(RUNOFF)
12.58	6.77	(RUNOFF)
14.08	6.84	(RUNOFF)
18.95	3.87	(RUNOFF)
23.51	2.92	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	1135.43	5671.49
10.47	37.61	5661.09
11.71	35.13	5661.03
12.71	35.43	5661.04
14.21	35.78	5661.04
18.96	19.92	5660.65
20.74	18.40	5660.61
21.71	15.48	5660.54
23.63	14.86	5660.52

OPERATION RUNOFF CROSS SECTION 46

1

TR20 XEQ 03-26-99 09:06

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW

JOB 1 PASS 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	155.06	(RUNOFF)
10.45	7.80	(RUNOFF)
11.57	7.35	(RUNOFF)
12.57	7.48	(RUNOFF)
14.08	7.62	(RUNOFF)
18.93	4.33	(RUNOFF)
20.60	4.00	(RUNOFF)
23.51	3.31	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	1265.89	5672.64
10.46	45.41	5661.29
11.69	42.05	5661.20
12.68	42.44	5661.21
14.19	42.91	5661.22
18.95	24.26	5660.76
20.71	22.18	5660.70
21.68	18.77	5660.62
23.59	18.05	5660.60

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 40 BY 265.1 CFS

OPERATION REACH CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	1120.59	5592.13
10.58	45.35	5581.37
11.85	40.65	5581.24
12.85	41.05	5581.25
14.35	41.46	5581.27
19.06	24.24	5580.79
20.88	21.39	5580.71
21.84	18.50	5580.63
23.74	17.61	5580.61

OPERATION RUNOFF CROSS SECTION 40

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	268.50	(RUNOFF)
10.45	12.59	(RUNOFF)
11.60	11.55	(RUNOFF)
12.60	11.68	(RUNOFF)
14.11	11.79	(RUNOFF)

18.90	6.83	(RUNOFF)
20.64	6.13	(RUNOFF)
21.60	5.30	(RUNOFF)
23.53	5.09	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.42	1294.21	5593.77
10.48	57.86	5581.74
11.80	50.59	5581.52
12.80	51.12	5581.53
14.30	51.55	5581.55
18.96	31.06	5580.98
20.84	26.76	5580.86
21.79	23.45	5580.77
23.66	22.17	5580.73

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 18 BY 287.9 CFS

OPERATION REACH CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.61	1138.89	5486.88
10.62	57.77	5480.81
11.97	48.97	5480.69
12.97	49.47	5480.69
14.49	49.59	5480.69
19.08	31.04	5480.46
21.04	25.73	5480.40
21.95	23.17	5480.36
23.81	21.61	5480.35

OPERATION RUNOFF CROSS SECTION 18

1

TR20 XEQ 03-26-99 09:06

REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW

DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 2

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	211.55	(RUNOFF)
10.46	11.85	(RUNOFF)
11.70	10.24	(RUNOFF)
12.71	10.25	(RUNOFF)
14.22	10.25	(RUNOFF)
18.91	6.39	(RUNOFF)
23.58	4.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.59	1289.77	5487.72
10.55	69.55	5480.97

11.94	58.02	5480.81
12.94	58.59	5480.82
14.46	58.65	5480.82
18.98	37.42	5480.54
21.02	30.55	5480.46
21.91	27.76	5480.42
23.75	25.68	5480.40

*** WARNING - STRUCTURE 42 DELTA T IS TOO LARGE. O / 2 > S / DELTA T OCCURED 3 TIMES STARTING WITH POINT260

OPERATION RESVOR STRUCTURE 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.72	1159.75	5262.00
10.56	69.56	5250.77
11.96	57.99	5250.64
12.96	58.56	5250.65
14.48	58.59	5250.65
19.00	37.41	5250.42
21.04	30.53	5250.34
21.93	27.75	5250.31
23.77	25.65	5250.29

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 2.61 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.10	1.64	9.38	35.49
6.00	DISCHG	98.86	223.57	405.19	604.68	858.99	996.23	1102.89	1157.93	1136.31	1048.14
7.00	DISCHG	900.67	645.47	457.71	355.96	254.74	232.79	200.94	187.46	176.11	169.36
8.00	DISCHG	163.51	158.10	152.11	145.42	137.85	129.33	119.64	109.02	98.70	89.84
9.00	DISCHG	82.90	77.86	74.41	72.15	70.74	69.88	69.40	69.15	69.04	69.03
10.00	DISCHG	69.07	69.14	69.22	69.32	69.42	69.52	69.54	69.31	68.47	66.70
11.00	DISCHG	63.88	60.07	55.67	51.79	49.41	48.90	50.30	53.07	55.91	57.68
12.00	DISCHG	57.84	56.26	53.43	50.56	48.82	48.73	50.42	53.37	56.36	58.23

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
PAGE 20

13.00	DISCHG	58.41	56.72	53.50	49.64	45.96	42.94	40.75	39.51	39.40	40.64
14.00	DISCHG	43.19	46.94	51.42	55.45	57.96	58.55	57.09	53.98	50.16	46.50
15.00	DISCHG	43.45	41.16	39.54	38.46	37.76	37.32	37.05	36.90	36.82	36.78
16.00	DISCHG	36.77	36.77	36.78	36.80	36.82	36.84	36.86	36.89	36.91	36.93
17.00	DISCHG	36.96	36.98	37.00	37.03	37.05	37.07	37.10	37.12	37.14	37.17
18.00	DISCHG	37.19	37.21	37.23	37.26	37.28	37.30	37.33	37.35	37.37	37.39
19.00	DISCHG	37.41	37.39	37.27	36.88	36.09	34.87	33.16	31.04	28.75	26.51
20.00	DISCHG	24.43	22.57	21.02	20.09	20.04	20.97	22.84	25.34	27.81	29.61
21.00	DISCHG	30.46	30.34	29.45	28.29	27.32	26.78	26.74	27.07	27.49	27.73
22.00	DISCHG	27.67	27.25	26.53	25.69	24.91	24.26	23.78	23.44	23.22	23.07
23.00	DISCHG	22.99	22.95	22.99	23.16	23.53	24.09	24.79	25.44	25.61	24.92
24.00	DISCHG	23.19	20.38	16.74	12.90	9.44	6.64	4.52	2.99	1.94	1.22
25.00	DISCHG	.76	.46	.27	.15	.09	.05	.02	.01	.00	

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	241.74	(RUNOFF)

10.43	11.17	(RUNOFF)
11.64	9.96	(RUNOFF)
12.65	10.05	(RUNOFF)
14.15	10.06	(RUNOFF)
18.90	6.00	(RUNOFF)
20.69	5.19	(RUNOFF)
23.56	4.37	(RUNOFF)

OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	183.24	5605.02
10.57	11.15	5600.64
11.85	9.34	5600.56
12.86	9.37	5600.56
14.39	9.21	5600.55
19.05	5.99	5600.36
23.73	4.15	5600.25

OPERATION RESVOR STRUCTURE 39

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.60	174.93	5607.25
10.57	11.15	5600.86
11.86	9.34	5600.72
12.87	9.37	5600.72
14.40	9.21	5600.71
19.06	5.99	5600.46
23.74	4.14	5600.32

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.41 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .04 .76 5.16				
6.00	DISCHG	19.30 45.15 84.81 122.24 155.28 170.86 174.93 170.21 153.11 126.37				
7.00	DISCHG	103.21 86.17 69.58 58.00 49.89 43.46 38.77 35.25 32.56 30.35				
8.00	DISCHG	28.47 26.86 25.40 24.01 22.58 20.87 19.12 17.41 15.93 14.72				
9.00	DISCHG	13.76 13.02 12.46 12.05 11.75 11.54 11.38 11.28 11.21 11.16				
10.00	DISCHG	11.14 11.12 11.12 11.12 11.13 11.14 11.15 11.12 10.97 10.61				
11.00	DISCHG	10.05 9.35 8.67 8.19 8.02 8.17 8.54 8.98 9.28 9.32				
12.00	DISCHG	9.08 8.64 8.17 7.84 7.78 8.02 8.45 8.94 9.29 9.36				
13.00	DISCHG	9.13 8.71 8.19 7.69 7.26 6.90 6.62 6.44 6.45 6.71				
14.00	DISCHG	7.23 7.90 8.56 9.04 9.21 9.06 8.68 8.20 7.72 7.30				
15.00	DISCHG	6.96 6.68 6.47 6.31 6.19 6.10 6.03 5.99 5.95 5.93				
16.00	DISCHG	5.92 5.91 5.90 5.90 5.90 5.90 5.90 5.90 5.91 5.91				
17.00	DISCHG	5.91 5.92 5.92 5.92 5.93 5.93 5.94 5.94 5.94 5.95				
18.00	DISCHG	5.95 5.95 5.96 5.96 5.96 5.97 5.97 5.98 5.98 5.98				
19.00	DISCHG	5.99 5.99 5.97 5.90 5.75 5.50 5.20 4.88 4.57 4.25				
20.00	DISCHG	3.94 3.64 3.40 3.28 3.34 3.57 3.92 4.29 4.59 4.74				
21.00	DISCHG	4.75 4.64 4.49 4.36 4.30 4.30 4.35 4.42 4.47 4.46				
22.00	DISCHG	4.40 4.30 4.18 4.07 3.97 3.89 3.83 3.78 3.75 3.72				
23.00	DISCHG	3.70 3.69 3.69 3.71 3.78 3.89 4.03 4.13 4.13 3.93				

24.00	DISCHG	3.54	3.02	2.47	1.96	1.52	1.16	.87	.65	.48	.35
25.00	DISCHG	.25	.18	.13	.09	.06	.04	.03	.02	.01	.01
26.00	DISCHG	.00									

OPERATION REACH CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	161.37	5464.31
10.68	11.14	5460.54
12.04	9.12	5460.46
13.06	9.11	5460.46
14.61	8.88	5460.44
19.18	5.98	5460.30
23.90	4.06	5460.20

OPERATION RUNOFF CROSS SECTION 20

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	475.29	(RUNOFF)
10.38	11.26	(RUNOFF)
11.52	10.84	(RUNOFF)
12.52	10.92	(RUNOFF)
14.02	10.94	(RUNOFF)
18.88	5.79	(RUNOFF)
20.54	5.53	(RUNOFF)
21.52	4.56	(RUNOFF)
23.47	4.47	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	483.07	5467.53
6.67	202.46	5464.72
11.47	19.36	5460.80
12.51	18.95	5460.79
14.05	17.73	5460.75
18.95	11.79	5460.56
21.47	8.96	5460.45
23.48	8.19	5460.41

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.72	1361.67	5488.13
10.47	91.93	5481.29
11.94	73.32	5481.03
12.94	73.85	5481.03
14.47	73.57	5481.03

18.96	49.20	5480.69
21.05	38.67	5480.56
21.88	35.84	5480.52
23.60	32.72	5480.48

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 6 BY 360.2 CFS

OPERATION REACH CROSS SECTION 6

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.88	1317.34	5330.71
10.58	91.85	5321.82
12.09	72.78	5321.40
13.09	73.23	5321.41
14.63	72.50	5321.40
19.07	49.17	5320.89
21.24	38.19	5320.72
21.99	35.80	5320.69
23.75	32.38	5320.64

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	396.16	(RUNOFF)
10.45	13.99	(RUNOFF)
11.58	12.93	(RUNOFF)
12.58	13.04	(RUNOFF)
14.09	13.11	(RUNOFF)
18.89	7.37	(RUNOFF)
20.61	6.71	(RUNOFF)
21.58	5.72	(RUNOFF)
23.51	5.51	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.87	1373.55	5331.14
10.48	105.72	5322.04
13.03	81.34	5321.59
14.61	80.53	5321.57
18.97	56.51	5321.04
21.29	43.25	5320.80
23.62	37.23	5320.71

OPERATION RESVOR STRUCTURE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.87	1372.27	5354.23
10.49	105.82	5350.45

13.05	81.32	5350.35
14.61	80.51	5350.34
18.97	56.51	5350.24
21.29	43.26	5350.19
23.62	37.23	5350.16

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS
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TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.68	17.10	93.91	268.36
6.00	DISCHG	517.22	777.85	964.58	1023.09	1032.65	1104.13	1202.19	1289.49	1359.96	1369.06
7.00	DISCHG	1321.98	1205.07	1004.13	794.70	637.99	501.43	421.06	362.87	322.40	294.47
8.00	DISCHG	273.81	259.61	245.48	231.68	216.37	203.39	190.32	178.58	165.53	153.64
9.00	DISCHG	141.80	132.49	124.25	118.68	113.95	111.24	108.81	107.74	106.53	106.27
10.00	DISCHG	105.67	105.77	105.46	105.70	105.53	105.82	105.43	104.46	101.69	98.51
11.00	DISCHG	94.83	91.66	88.57	86.54	84.66	83.32	82.16	81.65	80.99	80.86
12.00	DISCHG	80.89	81.10	81.08	81.35	81.33	81.18	81.01	81.05	80.90	81.02
13.00	DISCHG	81.29	81.27	80.08	77.61	74.06	70.26	66.87	65.11	65.36	67.09
14.00	DISCHG	69.42	72.07	74.54	76.55	78.23	79.73	80.51	79.93	77.74	74.48
15.00	DISCHG	70.72	67.16	64.05	61.62	59.75	58.43	57.48	56.86	56.42	56.16
16.00	DISCHG	55.97	55.87	55.80	55.78	55.76	55.78	55.78	55.81	55.82	55.86
17.00	DISCHG	55.88	55.92	55.94	55.98	56.00	56.04	56.07	56.11	56.13	56.17
18.00	DISCHG	56.19	56.23	56.26	56.29	56.32	56.36	56.38	56.42	56.45	56.48
19.00	DISCHG	56.50	56.41	55.91	54.80	53.36	51.86	50.22	48.14	45.46	42.45
20.00	DISCHG	39.51	36.95	35.27	34.67	34.80	35.32	36.17	37.28	38.53	39.93
21.00	DISCHG	41.32	42.44	43.08	43.25	42.99	42.49	41.94	41.46	41.03	40.75
22.00	DISCHG	40.57	40.40	40.03	39.41	38.61	37.77	36.97	36.30	35.77	35.38
23.00	DISCHG	35.10	34.96	35.07	35.50	36.11	36.74	37.22	36.99	35.80	34.03
24.00	DISCHG	32.12	29.93	27.09	23.48	19.40	15.36	11.72	8.68	6.27	4.44
25.00	DISCHG	3.09	2.13	1.45	.97	.65	.43	.29	.19	.12	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.87	1371.96	5344.88
10.43	105.72	5340.47
13.02	81.38	5340.36
14.61	80.55	5340.36
18.97	56.51	5340.25
21.29	43.25	5340.19
23.62	37.23	5340.17

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.67	16.69	92.29	265.32
6.00	DISCHG	510.99	766.12	962.49	1020.71	1033.87	1097.31	1199.95	1284.29	1358.60	1369.46
7.00	DISCHG	1325.47	1211.63	1014.93	799.35	644.26	504.96	422.14	363.37	322.99	294.64
8.00	DISCHG	274.19	259.63	245.83	231.71	216.75	203.37	190.68	178.54	165.91	153.60
9.00	DISCHG	142.15	132.40	124.54	118.54	114.21	111.07	109.03	107.55	106.74	106.08
10.00	DISCHG	105.86	105.58	105.64	105.52	105.71	105.64	105.61	104.32	101.90	98.39
11.00	DISCHG	95.04	91.55	88.75	86.42	84.83	83.19	82.31	81.53	81.13	80.74
12.00	DISCHG	81.01	80.98	81.19	81.24	81.43	81.08	81.11	80.96	80.99	80.93
13.00	DISCHG	81.37	81.20	80.18	77.58	74.19	70.25	66.97	65.06	65.41	67.00

14.00	DISCHG	69.45	71.98	74.56	76.48	78.26	79.67	80.54	79.91	77.82	74.49
15.00	DISCHG	70.81	67.17	64.12	61.61	59.80	58.41	57.52	56.84	56.45	56.13

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
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16.00	DISCHG	55.99	55.85	55.82	55.76	55.78	55.75	55.80	55.79	55.84	55.84
17.00	DISCHG	55.90	55.90	55.96	55.96	56.02	56.03	56.08	56.09	56.14	56.16
18.00	DISCHG	56.20	56.22	56.27	56.28	56.33	56.35	56.39	56.41	56.45	56.47
19.00	DISCHG	56.51	56.40	55.93	54.82	53.38	51.87	50.25	48.17	45.50	42.49
20.00	DISCHG	39.55	36.98	35.29	34.67	34.80	35.31	36.16	37.26	38.52	39.91
21.00	DISCHG	41.30	42.42	43.08	43.25	43.00	42.49	41.95	41.46	41.04	40.75
22.00	DISCHG	40.58	40.40	40.04	39.42	38.63	37.78	36.99	36.31	35.78	35.38
23.00	DISCHG	35.10	34.96	35.07	35.49	36.10	36.73	37.22	37.00	35.82	34.06
24.00	DISCHG	32.15	29.96	27.13	23.53	19.46	15.41	11.76	8.71	6.30	4.46
25.00	DISCHG	3.11	2.14	1.45	.98	.65	.43	.29	.19	.12	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RESVOR STRUCTURE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.88	1373.08	5324.88
10.49	105.76	5320.53
13.05	81.32	5320.41
14.61	80.49	5320.40
18.96	56.50	5320.28
21.29	43.26	5320.22
23.62	37.22	5320.19

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .65	16.24 90.50 261.93	
6.00	DISCHG 503.53 757.21 958.41 1020.32 1033.14 1092.78 1195.42	1281.25 1355.13 1371.49	
7.00	DISCHG 1327.34 1219.30 1024.45 804.59 649.06 509.19 423.45	364.65 322.98 295.49	
8.00	DISCHG 273.99 260.24 245.66 232.28 216.65 203.87 190.59	178.98 165.86 154.00	
9.00	DISCHG 142.10 132.73 124.47 118.79 114.10 111.27 108.91	107.71 106.62 106.21	
10.00	DISCHG 105.74 105.70 105.52 105.63 105.59 105.75 105.50	104.45 101.84 98.55	
11.00	DISCHG 94.99 91.70 88.70 86.54 84.76 83.30 82.23	81.62 81.05 80.82	
12.00	DISCHG 80.92 81.07 81.11 81.32 81.35 81.16 81.03	81.04 80.91 81.01	
13.00	DISCHG 81.28 81.28 80.13 77.70 74.17 70.38 66.95	65.14 65.32 67.04	
14.00	DISCHG 69.34 72.01 74.46 76.51 78.17 79.71 80.48	79.99 77.81 74.60	
15.00	DISCHG 70.81 67.27 64.12 61.69 59.78 58.47 57.48	56.89 56.41 56.17	
16.00	DISCHG 55.96 55.89 55.79 55.79 55.75 55.79 55.77	55.82 55.81 55.87	
17.00	DISCHG 55.87 55.93 55.93 55.99 55.99 56.05 56.06	56.11 56.12 56.18	
18.00	DISCHG 56.18 56.24 56.25 56.30 56.31 56.36 56.38	56.43 56.44 56.49	
19.00	DISCHG 56.49 56.42 55.93 54.85 53.39 51.91 50.26	48.21 45.53 42.54	
20.00	DISCHG 39.58 37.02 35.30 34.68 34.79 35.31 36.14	37.25 38.49 39.89	
21.00	DISCHG 41.27 42.42 43.07 43.26 43.00 42.51 41.95	41.47 41.04 40.75	
22.00	DISCHG 40.58 40.40 40.04 39.43 38.64 37.79 36.99	36.32 35.78 35.39	
23.00	DISCHG 35.10 34.96 35.06 35.48 36.09 36.73 37.21	37.01 35.84 34.09	
24.00	DISCHG 32.17 30.00 27.18 23.59 19.52 15.47 11.81	8.76 6.33 4.49	
25.00	DISCHG 3.12 2.15 1.46 .98 .66 .44 .29	.19 .12 .08	
26.00	DISCHG .05 .03 .02 .01 .00		

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
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OPERATION RESVOR STRUCTURE 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.88	1373.95	5315.90
9.66	108.64	5310.57
9.88	106.86	5310.56
10.10	106.25	5310.56
10.50	106.19	5310.56
13.06	81.49	5310.43
14.61	80.45	5310.42
18.97	56.51	5310.30
21.29	43.25	5310.23
23.62	37.22	5310.20

TIME(HRS)	DISCHG	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00	.63	15.87 89.01 259.09
6.00	DISCHG	494.53 746.92 953.91 1020.11 1032.46 1089.40 1191.53	1278.92	1352.24 1372.90
7.00	DISCHG	1329.04 1225.00 1032.46 812.26 653.26 515.51 424.11	367.67	321.14 297.91
8.00	DISCHG	272.22 262.27 244.10 234.10 215.31 205.45 189.41	180.39	164.85 155.26
9.00	DISCHG	141.20 133.82 123.64 119.72 113.33 112.06 108.21	108.41	105.98 106.83
10.00	DISCHG	105.17 106.25 105.01 106.12 105.14 106.19 105.10	104.86	101.52 98.94
11.00	DISCHG	94.71 92.05 88.44 86.84 84.52 83.57 82.00	81.85	80.84 81.02
12.00	DISCHG	80.73 81.24 80.94 81.47 81.20 81.31 80.89	81.17	80.79 81.12
13.00	DISCHG	81.17 81.39 80.06 77.83 74.14 70.51 66.91	65.22	65.24 67.07
14.00	DISCHG	69.25 72.03 74.38 76.54 78.11 79.73 80.44	80.04	77.82 74.67
15.00	DISCHG	70.84 67.34 64.13 61.74 59.78 58.50 57.48	56.90	56.41 56.18
16.00	DISCHG	55.95 55.89 55.79 55.80 55.75 55.79 55.77	55.82	55.81 55.87
17.00	DISCHG	55.87 55.92 55.93 55.98 56.00 56.05 56.06	56.11	56.13 56.17
18.00	DISCHG	56.19 56.23 56.26 56.29 56.32 56.36 56.38	56.42	56.45 56.48
19.00	DISCHG	56.50 56.41 55.94 54.86 53.42 51.92 50.29	48.24	45.58 42.58
20.00	DISCHG	39.63 37.05 35.32 34.67 34.79 35.29 36.13	37.23	38.48 39.87
21.00	DISCHG	41.26 42.40 43.07 43.25 43.01 42.51 41.96	41.47	41.05 40.75
22.00	DISCHG	40.59 40.40 40.05 39.44 38.65 37.80 37.01	36.32	35.79 35.39
23.00	DISCHG	35.11 34.96 35.06 35.47 36.08 36.72 37.21	37.02	35.87 34.11
24.00	DISCHG	32.20 30.03 27.22 23.64 19.58 15.52 11.86	8.79	6.36 4.51
25.00	DISCHG	3.14 2.16 1.47 .99 .66 .44 .29	.19	.12 .08
26.00	DISCHG	.05 .03 .02 .01 .00		

OPERATION RESVOR STRUCTURE 31

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.88	1373.35	5304.88
9.67	108.74	5300.44
9.89	106.93	5300.43

10.10	106.26	5300.43
10.50	106.12	5300.42
13.03	81.35	5300.33
14.61	80.57	5300.32
18.99	56.54	5300.23
21.29	43.24	5300.17
23.62	37.23	5300.15

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.62	15.59	87.89	256.94
6.00	DISCHG	492.13	735.49	952.72	1017.60	1034.08	1085.03	1190.21	1275.61	1351.44	1372.56
7.00	DISCHG	1331.60	1228.04	1039.61	817.83	657.03	519.72	422.55	370.25	319.55	299.89
8.00	DISCHG	270.80	263.82	242.95	235.39	214.42	206.49	188.72	181.23	164.34	155.94
9.00	DISCHG	140.82	134.32	123.34	120.08	113.11	112.30	108.06	108.55	105.89	106.90
10.00	DISCHG	105.13	106.26	105.02	106.09	105.18	106.12	105.18	104.79	101.65	98.86
11.00	DISCHG	94.87	91.95	88.60	86.71	84.69	83.43	82.17	81.69	81.02	80.85
12.00	DISCHG	80.90	81.07	81.11	81.30	81.38	81.14	81.06	81.00	80.96	80.95
13.00	DISCHG	81.33	81.23	80.24	77.70	74.33	70.39	67.09	65.08	65.38	66.90
14.00	DISCHG	69.37	71.86	74.50	76.38	78.23	79.58	80.56	79.93	77.97	74.59
15.00	DISCHG	70.99	67.25	64.27	61.65	59.90	58.41	57.59	56.81	56.51	56.09
16.00	DISCHG	56.05	55.81	55.87	55.71	55.83	55.71	55.84	55.74	55.89	55.80
17.00	DISCHG	55.94	55.86	56.00	55.92	56.06	55.99	56.12	56.05	56.18	56.12
18.00	DISCHG	56.24	56.18	56.30	56.25	56.36	56.32	56.42	56.38	56.48	56.44
19.00	DISCHG	56.53	56.38	55.98	54.84	53.46	51.91	50.34	48.23	45.63	42.58
20.00	DISCHG	39.68	37.05	35.35	34.65	34.81	35.27	36.14	37.20	38.48	39.84
21.00	DISCHG	41.27	42.37	43.08	43.24	43.03	42.50	41.98	41.46	41.07	40.74
22.00	DISCHG	40.60	40.39	40.07	39.44	38.67	37.80	37.02	36.32	35.80	35.38
23.00	DISCHG	35.12	34.95	35.06	35.46	36.08	36.71	37.21	37.02	35.88	34.13
24.00	DISCHG	32.22	30.05	27.26	23.68	19.62	15.56	11.89	8.82	6.38	4.52
25.00	DISCHG	3.15	2.17	1.48	.99	.67	.44	.30	.19	.13	.08
26.00	DISCHG	.05	.03	.02	.01	.00					

OPERATION RUNOFF CROSS SECTION 4

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	310.01	(RUNOFF)
10.43	14.25	(RUNOFF)
11.64	12.81	(RUNOFF)
12.64	12.93	(RUNOFF)
14.14	12.99	(RUNOFF)
18.90	7.67	(RUNOFF)
20.67	6.70	(RUNOFF)
21.63	5.88	(RUNOFF)
23.55	5.63	(RUNOFF)

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	242.79	5324.71
10.57	14.23	5320.51

11.83	12.07	5320.45
12.83	12.15	5320.45
14.36	12.01	5320.45
19.05	7.67	5320.31
21.81	5.75	5320.23
23.71	5.38	5320.21

OPERATION RESVOR STRUCTURE 45

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	242.36	5342.89
10.58	14.24	5340.21
11.83	12.08	5340.18
12.84	12.15	5340.18
14.36	12.01	5340.18
19.05	7.67	5340.11
21.81	5.75	5340.08
23.71	5.38	5340.08

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .54 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .08 1.44 8.43		
6.00	DISCHG 30.53 75.37 137.95 198.68 236.95 241.38 223.85 192.56 162.12 132.84		
7.00	DISCHG 108.79 89.05 73.92 62.22 53.89 47.66 43.43 40.16 37.80 35.59		
8.00	DISCHG 33.84 32.18 30.84 29.24 27.43 25.15 22.91 20.73 19.04 17.61		
9.00	DISCHG 16.61 15.80 15.29 14.86 14.62 14.41 14.31 14.21 14.19 14.14		
10.00	DISCHG 14.16 14.14 14.17 14.17 14.20 14.21 14.23 14.16 13.91 13.31		
11.00	DISCHG 12.45 11.44 10.57 10.03 10.00 10.40 11.05 11.68 12.05 11.96		
12.00	DISCHG 11.50 10.79 10.13 9.76 9.85 10.33 11.04 11.72 12.12 12.06		
13.00	DISCHG 11.60 10.90 10.15 9.48 8.94 8.52 8.20 8.05 8.18 8.69		
14.00	DISCHG 9.52 10.50 11.41 11.94 11.97 11.58 10.92 10.21 9.56 9.03		

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
PAGE 3

15.00	DISCHG	8.61	8.30	8.06	7.90	7.78	7.69	7.63	7.59	7.57	7.55
16.00	DISCHG	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.55	7.56	7.56
17.00	DISCHG	7.57	7.57	7.58	7.58	7.59	7.59	7.60	7.60	7.61	7.61
18.00	DISCHG	7.62	7.62	7.63	7.63	7.63	7.64	7.64	7.65	7.65	7.66
19.00	DISCHG	7.66	7.67	7.64	7.52	7.26	6.88	6.45	6.02	5.61	5.19
20.00	DISCHG	4.79	4.41	4.14	4.06	4.25	4.67	5.21	5.73	6.09	6.21
21.00	DISCHG	6.13	5.92	5.69	5.52	5.45	5.49	5.59	5.70	5.75	5.72
22.00	DISCHG	5.60	5.44	5.28	5.13	5.01	4.92	4.85	4.80	4.76	4.74
23.00	DISCHG	4.72	4.71	4.72	4.77	4.89	5.06	5.25	5.37	5.30	4.93
24.00	DISCHG	4.29	3.53	2.78	2.13	1.59	1.17	.85	.60	.43	.30
25.00	DISCHG	.21	.14	.09	.06	.04	.02	.01	.01	.00	

OPERATION RESVOR STRUCTURE 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	242.42	5343.10
10.53	14.23	5340.25
11.84	12.07	5340.22
12.84	12.15	5340.22
14.36	12.01	5340.21

19.05	7.67	5340.14
21.81	5.75	5340.10
23.72	5.38	5340.10

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.08	1.39	8.19
6.00	DISCHG	29.84	74.15	136.07	196.86	236.37	241.64	224.62	193.67	162.88	133.84
7.00	DISCHG	109.24	89.46	74.17	62.47	54.00	47.82	43.46	40.26	37.80	35.68
8.00	DISCHG	33.83	32.26	30.82	29.32	27.43	25.24	22.92	20.82	19.03	17.68
9.00	DISCHG	16.60	15.85	15.27	14.90	14.59	14.44	14.29	14.24	14.16	14.17
10.00	DISCHG	14.13	14.16	14.15	14.19	14.18	14.23	14.21	14.18	13.90	13.34
11.00	DISCHG	12.46	11.48	10.57	10.05	9.99	10.40	11.02	11.68	12.04	11.98
12.00	DISCHG	11.50	10.82	10.14	9.77	9.83	10.32	11.02	11.72	12.11	12.07
13.00	DISCHG	11.60	10.92	10.16	9.50	8.95	8.53	8.21	8.06	8.17	8.68
14.00	DISCHG	9.50	10.48	11.39	11.93	11.98	11.59	10.94	10.23	9.57	9.04
15.00	DISCHG	8.62	8.30	8.07	7.90	7.78	7.70	7.64	7.60	7.57	7.55
16.00	DISCHG	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.55	7.56	7.56
17.00	DISCHG	7.57	7.57	7.58	7.58	7.59	7.59	7.60	7.60	7.61	7.61
18.00	DISCHG	7.62	7.62	7.63	7.63	7.63	7.64	7.64	7.65	7.65	7.66
19.00	DISCHG	7.66	7.67	7.64	7.52	7.27	6.89	6.46	6.03	5.62	5.20
20.00	DISCHG	4.80	4.42	4.14	4.06	4.24	4.66	5.20	5.72	6.08	6.21
21.00	DISCHG	6.13	5.93	5.70	5.52	5.45	5.49	5.59	5.69	5.75	5.72
22.00	DISCHG	5.60	5.45	5.28	5.13	5.01	4.92	4.85	4.80	4.77	4.74
23.00	DISCHG	4.72	4.71	4.72	4.77	4.88	5.05	5.25	5.37	5.31	4.94
24.00	DISCHG	4.31	3.55	2.79	2.14	1.60	1.18	.85	.61	.43	.30
25.00	DISCHG	.21	.14	.09	.06	.04	.02	.01	.01	.01	

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

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OPERATION RESVOR STRUCTURE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	243.42	5324.56
10.57	14.23	5320.38
11.84	12.07	5320.32
12.84	12.15	5320.32
14.36	12.01	5320.32
19.05	7.67	5320.20
21.82	5.75	5320.15
23.72	5.37	5320.14

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .54 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.07	1.31	7.84
6.00	DISCHG	28.83	72.35	130.67	194.18	233.53	243.13	225.59	196.75	164.03	136.21
7.00	DISCHG	110.16	90.96	74.71	62.71	54.31	47.93	43.63	40.31	37.91	35.72
8.00	DISCHG	33.91	32.28	30.89	29.35	27.51	25.30	23.01	20.86	19.10	17.70
9.00	DISCHG	16.64	15.86	15.30	14.90	14.62	14.43	14.31	14.23	14.18	14.15
10.00	DISCHG	14.15	14.15	14.16	14.17	14.20	14.21	14.23	14.17	13.93	13.35
11.00	DISCHG	12.50	11.50	10.61	10.05	9.99	10.37	11.01	11.65	12.04	11.98
12.00	DISCHG	11.53	10.83	10.16	9.77	9.83	10.30	11.00	11.69	12.11	12.07
13.00	DISCHG	11.63	10.94	10.19	9.52	8.97	8.53	8.22	8.06	8.17	8.65
14.00	DISCHG	9.47	10.45	11.36	11.92	11.98	11.61	10.96	10.25	9.60	9.05
15.00	DISCHG	8.63	8.31	8.08	7.90	7.78	7.70	7.64	7.60	7.57	7.55

16.00	DISCHG	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.55	7.56	7.56
17.00	DISCHG	7.57	7.57	7.58	7.58	7.59	7.59	7.60	7.60	7.61	7.61
18.00	DISCHG	7.62	7.62	7.63	7.63	7.63	7.64	7.64	7.65	7.65	7.66
19.00	DISCHG	7.66	7.67	7.64	7.53	7.28	6.91	6.48	6.04	5.63	5.22
20.00	DISCHG	4.81	4.43	4.15	4.06	4.23	4.64	5.18	5.71	6.07	6.21
21.00	DISCHG	6.14	5.94	5.70	5.53	5.45	5.49	5.58	5.69	5.75	5.72
22.00	DISCHG	5.61	5.45	5.29	5.14	5.02	4.92	4.85	4.80	4.77	4.74
23.00	DISCHG	4.72	4.71	4.72	4.76	4.88	5.05	5.24	5.37	5.31	4.96
24.00	DISCHG	4.33	3.57	2.82	2.16	1.62	1.19	.86	.62	.43	.30
25.00	DISCHG	.21	.14	.10	.06	.04	.02	.01	.01	.01	

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	162.72	(RUNOFF)
7.47	13.30	(RUNOFF)
10.45	5.70	(RUNOFF)
11.54	5.48	(RUNOFF)
12.54	5.55	(RUNOFF)
14.04	5.62	(RUNOFF)
18.95	3.08	(RUNOFF)
23.48	2.38	(RUNOFF)

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
PAGE 46

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	140.93	5348.41
10.55	5.71	5340.40
11.68	5.33	5340.37
12.68	5.41	5340.38
14.19	5.46	5340.38
19.05	3.08	5340.22
23.61	2.32	5340.16

OPERATION RESVOR STRUCTURE 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	141.00	5344.31
7.58	13.39	5340.42
10.56	5.71	5340.18
11.68	5.33	5340.17
12.69	5.41	5340.17
14.19	5.46	5340.17
19.05	3.08	5340.10
23.62	2.32	5340.07

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = .22 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	1.21	10.79
6.00	DISCHG	38.71	84.90	130.13	140.30	116.26	82.97	58.41	41.83	31.30	23.86

7.00	DISCHG	19.37	16.37	14.90	13.84	13.59	13.30	13.38	13.18	12.91	12.24
8.00	DISCHG	11.81	11.36	11.01	10.00	8.76	7.50	6.73	6.17	5.92	5.71
9.00	DISCHG	5.67	5.59	5.61	5.57	5.60	5.58	5.62	5.60	5.63	5.62
10.00	DISCHG	5.65	5.64	5.67	5.66	5.69	5.68	5.70	5.58	5.17	4.51
11.00	DISCHG	3.91	3.48	3.34	3.61	4.20	4.76	5.18	5.32	5.05	4.47
12.00	DISCHG	3.90	3.50	3.36	3.64	4.25	4.83	5.25	5.40	5.12	4.52
13.00	DISCHG	3.94	3.53	3.28	3.13	3.05	3.00	2.98	3.08	3.52	4.20
14.00	DISCHG	4.84	5.29	5.45	5.17	4.59	4.00	3.59	3.33	3.18	3.09
15.00	DISCHG	3.04	3.02	3.01	3.00	3.00	3.00	3.00	3.00	3.01	3.01
16.00	DISCHG	3.01	3.01	3.01	3.02	3.02	3.02	3.02	3.02	3.03	3.03
17.00	DISCHG	3.03	3.03	3.03	3.04	3.04	3.04	3.04	3.04	3.05	3.05
18.00	DISCHG	3.05	3.05	3.05	3.06	3.06	3.06	3.06	3.06	3.07	3.07
19.00	DISCHG	3.07	3.07	3.03	2.85	2.56	2.29	2.11	1.97	1.81	1.63
20.00	DISCHG	1.48	1.38	1.39	1.63	2.04	2.43	2.70	2.82	2.74	2.51
21.00	DISCHG	2.28	2.11	2.03	2.06	2.17	2.28	2.36	2.39	2.33	2.21
22.00	DISCHG	2.08	2.00	1.94	1.91	1.89	1.88	1.88	1.87	1.87	1.87
23.00	DISCHG	1.88	1.88	1.90	1.98	2.11	2.24	2.32	2.27	1.95	1.42
24.00	DISCHG	.92	.57	.35	.21	.12	.07	.04	.02	.01	.00

---1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 2
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OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	484.15	(RUNOFF)
10.40	18.57	(RUNOFF)
11.66	16.41	(RUNOFF)
12.65	16.49	(RUNOFF)
14.16	16.43	(RUNOFF)
18.88	9.73	(RUNOFF)
20.69	8.35	(RUNOFF)
21.64	7.39	(RUNOFF)
23.56	7.02	(RUNOFF)

*** WARNING REACH 22 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	479.09	5464.96
10.51	18.57	5460.57
11.76	16.36	5460.53
12.76	16.44	5460.53
14.27	16.38	5460.53
18.98	9.73	5460.39
20.80	8.33	5460.33
21.75	7.38	5460.30
23.66	7.00	5460.28

OPERATION RESVOR STRUCTURE 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	476.41	5255.74
10.51	18.57	5250.39
11.77	16.36	5250.34
12.77	16.44	5250.34
14.28	16.38	5250.34
18.98	9.72	5250.20
20.81	8.33	5250.17
21.76	7.38	5250.15
23.67	7.00	5250.15

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .56 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00	1.23 13.27 53.28	
6.00 DISCHG	132.02 248.42 369.96 460.64 473.14 418.79 334.35	246.29 184.04 144.30	
7.00 DISCHG	112.65 90.92 74.52 65.65 58.00 54.23 50.54	48.84 46.32 44.35	

1

TR20 XEQ 03-26-99 09:06		SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW										JOB 1	PASS
REV PC 09/83(.2)		DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT										PAGE	42
8.00	DISCHG	41.77	40.11	38.28	36.32	33.22	29.82	26.45	23.87	21.98	20.80		
9.00	DISCHG	19.94	19.43	19.06	18.84	18.67	18.59	18.52	18.50	18.48	18.48		
10.00	DISCHG	18.48	18.50	18.51	18.53	18.55	18.57	18.56	18.37	17.74	16.51		
11.00	DISCHG	14.92	13.40	12.32	12.04	12.71	13.93	15.20	16.13	16.32	15.57		
12.00	DISCHG	14.30	13.01	12.05	11.90	12.65	13.93	15.25	16.24	16.40	15.65		
13.00	DISCHG	14.40	13.06	11.90	11.10	10.58	10.22	10.00	10.03	10.60	11.82		
14.00	DISCHG	13.42	15.00	16.12	16.35	15.66	14.43	13.09	11.95	11.17	10.65		
15.00	DISCHG	10.30	10.06	9.91	9.80	9.74	9.69	9.66	9.64	9.63	9.62		
16.00	DISCHG	9.61	9.61	9.62	9.62	9.62	9.63	9.63	9.64	9.64	9.64		
17.00	DISCHG	9.65	9.65	9.66	9.66	9.66	9.67	9.67	9.68	9.68	9.68		
18.00	DISCHG	9.69	9.69	9.69	9.70	9.70	9.71	9.71	9.71	9.72	9.72		
19.00	DISCHG	9.72	9.72	9.64	9.38	8.85	8.18	7.53	6.94	6.43	5.92		
20.00	DISCHG	5.42	4.99	4.76	4.93	5.57	6.46	7.37	8.08	8.33	8.15		
21.00	DISCHG	7.72	7.23	6.83	6.67	6.74	6.94	7.18	7.35	7.37	7.20		
22.00	DISCHG	6.93	6.64	6.40	6.23	6.12	6.04	5.99	5.96	5.94	5.93		
23.00	DISCHG	5.92	5.91	5.95	6.07	6.31	6.62	6.90	6.98	6.62	5.74		
24.00	DISCHG	4.53	3.32	2.32	1.60	1.10	.76	.51	.34	.23	.15		
25.00	DISCHG	.10	.06	.04	.02	.01	.00						

OPERATION REACH CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.57	413.05	5327.34
10.65	18.56	5320.88
11.94	15.69	5320.79
12.95	15.75	5320.79
14.47	15.56	5320.78
19.13	9.72	5320.58
21.02	7.92	5320.48
21.93	7.26	5320.44
23.82	6.78	5320.41

OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
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6.13	458.38	(RUNOFF)
10.39	12.76	(RUNOFF)
11.57	11.95	(RUNOFF)
12.57	12.00	(RUNOFF)
14.07	12.07	(RUNOFF)
18.87	6.60	(RUNOFF)
20.59	6.09	(RUNOFF)
21.56	5.13	(RUNOFF)
23.50	4.96	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 10

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBFS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 2
PAGE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	588.99	5329.39
10.45	31.31	5321.29
11.66	25.32	5321.10
12.67	25.31	5321.10
14.22	24.63	5321.08
18.91	16.31	5320.81
21.61	12.02	5320.67
23.56	11.20	5320.64

OPERATION RESVOR STRUCTURE 97

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.00	250.63	5347.69
14.52	22.97	5341.04
21.09	12.16	5340.55
23.67	10.74	5340.49

TIME(HRS)	DISCHG	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .91 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .28	2.57 10.87 29.85	
6.00	DISCHG	56.70 88.05 124.10 150.60 173.32 193.97 214.34	231.46 242.95 249.03	
7.00	DISCHG	250.62 248.83 244.58 238.63 231.63 223.98 216.07	208.13 200.26 193.69	
8.00	DISCHG	187.28 181.02 174.87 168.79 162.77 156.82 150.98	145.25 139.64 134.19	
9.00	DISCHG	128.44 121.26 114.54 108.27 102.43 97.01 91.99	87.34 83.03 79.05	
10.00	DISCHG	75.38 71.99 68.85 65.96 63.30 60.83 58.55	56.39 54.29 52.23	
11.00	DISCHG	50.19 48.20 46.30 44.53 42.47 40.47 38.77	37.29 35.95 34.68	
12.00	DISCHG	33.46 32.29 31.20 30.26 29.49 28.89 28.44	28.09 27.75 27.39	
13.00	DISCHG	26.98 26.52 25.98 25.37 24.71 24.02 23.35	22.77 22.37 22.17	
14.00	DISCHG	22.17 22.31 22.54 22.76 22.91 22.97 22.94	22.79 22.53 22.19	
15.00	DISCHG	21.79 21.35 20.91 20.48 20.06 19.67 19.31	18.98 18.69 18.42	
16.00	DISCHG	18.17 17.95 17.76 17.58 17.43 17.29 17.17	17.06 16.96 16.88	
17.00	DISCHG	16.80 16.74 16.68 16.63 16.58 16.55 16.51	16.48 16.45 16.43	
18.00	DISCHG	16.41 16.40 16.38 16.37 16.36 16.35 16.34	16.34 16.33 16.33	
19.00	DISCHG	16.33 16.32 16.28 16.18 16.02 15.80 15.53	15.19 14.79 14.34	
20.00	DISCHG	13.84 13.34 12.88 12.50 12.24 12.08 12.03	12.04 12.08 12.12	
21.00	DISCHG	12.15 12.16 12.15 12.12 12.10 12.08 12.07	12.06 12.04 12.01	
22.00	DISCHG	11.96 11.89 11.80 11.69 11.57 11.44 11.31	11.18 11.06 10.94	
23.00	DISCHG	10.83 10.74 10.67 10.63 10.63 10.67 10.72	10.74 10.66 10.48	

24.00	DISCHG	10.19	9.81	9.34	8.79	8.19	7.55	6.92	6.29	5.70	5.14
25.00	DISCHG	4.62	4.15	3.71	3.32	2.97	2.65	2.36	2.10	1.88	1.67
26.00	DISCHG	1.49	1.32	1.18	1.05	.94	.83	.74	.66	.59	.52
27.00	DISCHG	.47	.42	.37	.33	.29	.26	.23	.21	.18	.16
28.00	DISCHG	.15	.13	.12	.10	.09	.08	.07	.07	.06	.05
29.00	DISCHG	.05	.04	.04	.03	.03	.03	.02	.02	.02	.02

OPERATION RESVOR STRUCTURE 24

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 4
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.03	250.48	5323.51
14.57	22.96	5320.44
21.14	12.16	5320.23
23.71	10.73	5320.20

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .91 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .14	1.41 6.67 20.24	
6.00	DISCHG 43.09 72.14 106.97 143.19 165.13 186.58 207.15	225.93 239.37 247.26	
7.00	DISCHG 250.29 249.65 246.14 240.73 234.05 226.60 218.76	210.82 202.92 195.95	
8.00	DISCHG 189.62 183.28 177.10 171.00 164.95 158.98 153.10	147.25 141.52 136.03	
9.00	DISCHG 130.41 123.78 116.77 110.37 104.38 99.02 94.54	89.70 85.22 81.08	
10.00	DISCHG 77.25 73.71 70.45 67.43 64.65 62.09 59.71	57.49 55.36 53.28	
11.00	DISCHG 51.23 49.22 47.27 45.43 43.51 41.49 39.64	38.04 36.63 35.32	
12.00	DISCHG 34.08 32.88 31.75 30.74 29.88 29.19 28.67	28.27 27.92 27.57	
13.00	DISCHG 27.19 26.75 26.25 25.68 25.04 24.37 23.69	23.07 22.58 22.28	
14.00	DISCHG 22.17 22.24 22.43 22.65 22.83 22.94 22.95	22.86 22.66 22.36	
15.00	DISCHG 21.99 21.57 21.13 20.70 20.27 19.87 19.50	19.15 18.84 18.55	
16.00	DISCHG 18.30 18.06 17.86 17.67 17.51 17.36 17.23	17.12 17.01 16.92	
17.00	DISCHG 16.84 16.77 16.71 16.66 16.61 16.57 16.53	16.50 16.47 16.44	
18.00	DISCHG 16.42 16.40 16.39 16.38 16.36 16.36 16.35	16.34 16.34 16.33	
19.00	DISCHG 16.33 16.32 16.30 16.23 16.10 15.91 15.66	15.36 14.99 14.57	
20.00	DISCHG 14.09 13.60 13.11 12.69 12.37 12.16 12.06	12.03 12.06 12.10	
21.00	DISCHG 12.14 12.16 12.15 12.14 12.11 12.09 12.08	12.07 12.05 12.03	
22.00	DISCHG 11.98 11.92 11.84 11.75 11.63 11.51 11.38	11.25 11.12 11.00	
23.00	DISCHG 10.89 10.79 10.70 10.65 10.63 10.65 10.69	10.73 10.70 10.57	
24.00	DISCHG 10.34 10.01 9.58 9.07 8.49 7.87 7.24	6.61 6.00 5.42	
25.00	DISCHG 4.89 4.39 3.93 3.52 3.15 2.81 2.51	2.24 1.99 1.77	
26.00	DISCHG 1.58 1.41 1.25 1.12 .99 .89 .79	.70 .63 .56	
27.00	DISCHG .50 .44 .39 .35 .31 .28 .25	.22 .20 .17	
28.00	DISCHG .16 .14 .12 .11 .10 .09 .08	.07 .06 .05	
29.00	DISCHG .05 .04 .04 .03 .03 .03 .02	.02 .02 .02	

OPERATION RUNOFF CROSS SECTION 8

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
5.97	611.77	(RUNOFF)
7.45	26.76	(RUNOFF)
10.41	10.79	(RUNOFF)
11.46	10.90	(RUNOFF)
12.46	10.90	(RUNOFF)

13.96	10.92	(RUNOFF)
18.85	5.44	(RUNOFF)
20.46	5.46	(RUNOFF)
21.46	4.37	(RUNOFF)
23.45	4.37	(RUNOFF)

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 3
PAGE 45

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 54

TO XSECTION 8

STARTING TIME = .00 RAIN DEPTH = 3.10 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 3 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.10	538.59	(RUNOFF)
7.46	37.94	(RUNOFF)
10.42	16.00	(RUNOFF)
11.52	15.53	(RUNOFF)
12.52	15.67	(RUNOFF)
14.02	15.86	(RUNOFF)
18.92	8.48	(RUNOFF)
20.53	8.15	(RUNOFF)
21.51	6.71	(RUNOFF)
23.47	6.60	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 56

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	255.85	(RUNOFF)
7.46	16.20	(RUNOFF)
10.41	6.77	(RUNOFF)
11.50	6.62	(RUNOFF)
12.50	6.67	(RUNOFF)
14.00	6.73	(RUNOFF)
18.88	3.55	(RUNOFF)
20.52	3.44	(RUNOFF)
23.46	2.78	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
PAGE 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	793.38	5728.16
7.46	54.13	5721.41
10.42	22.77	5720.69
11.51	22.14	5720.67
12.51	22.34	5720.68
14.01	22.59	5720.68
18.91	12.04	5720.45
20.53	11.59	5720.44
21.51	9.53	5720.38
23.47	9.39	5720.38

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

OPERATION REACH CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	747.13	5727.78
7.56	54.09	5721.41
10.54	22.76	5720.69
11.64	21.86	5720.67
12.64	22.05	5720.67
14.14	22.30	5720.68
19.02	12.03	5720.45
20.66	11.48	5720.43
21.64	9.47	5720.38
23.58	9.28	5720.37

OPERATION RUNOFF CROSS SECTION 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	57.60	(RUNOFF)
7.48	5.92	(RUNOFF)
10.45	2.59	(RUNOFF)
12.56	2.49	(RUNOFF)
14.07	2.55	(RUNOFF)
23.49	1.09	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 44

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 3
PAGE 47

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	803.45	5728.25
7.55	60.01	5721.56
10.48	25.34	5720.75
11.63	24.27	5720.72
12.63	24.49	5720.73
14.13	24.78	5720.73
18.96	13.46	5720.48
20.65	12.74	5720.46
21.63	10.58	5720.41
23.57	10.36	5720.41

*** WARNING REACH 42 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	749.84	5668.10
10.60	25.33	5660.78
11.76	23.98	5660.75
12.76	24.21	5660.75
14.26	24.48	5660.76
19.07	13.45	5660.49
20.78	12.56	5660.46
21.76	10.52	5660.41
23.69	10.22	5660.41

OPERATION RUNOFF CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	129.43	(RUNOFF)
10.45	5.77	(RUNOFF)
11.58	5.40	(RUNOFF)
12.58	5.48	(RUNOFF)
14.08	5.55	(RUNOFF)
18.95	3.15	(RUNOFF)
23.51	2.39	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRGD : P3S1_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	849.41	5668.97
10.48	31.06	5660.93
11.73	28.77	5660.87
12.73	29.06	5660.88
14.23	29.38	5660.88
18.97	16.60	5660.56

20.75	15.20	5660.53
21.72	12.85	5660.47
23.64	12.31	5660.46

OPERATION RUNOFF CROSS SECTION 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	105.64	(RUNOFF)
10.46	6.07	(RUNOFF)
11.57	5.73	(RUNOFF)
12.57	5.85	(RUNOFF)
14.08	5.98	(RUNOFF)
18.94	3.42	(RUNOFF)
23.51	2.63	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 42

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	936.39	5669.74
10.47	37.13	5661.08
11.70	34.10	5661.00
12.70	34.47	5661.01
14.20	34.91	5661.02
18.96	20.03	5660.65
20.73	18.14	5660.60
21.69	15.45	5660.54
23.60	14.84	5660.52

OPERATION REACH CROSS SECTION 40

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	815.22	5589.26
10.59	37.07	5581.14
11.87	32.91	5581.03
12.87	33.28	5581.04
14.37	33.59	5581.05
19.07	20.01	5580.68
20.91	17.42	5580.60
21.86	15.22	5580.54
23.75	14.45	5580.52

OPERATION RUNOFF CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	193.89	(RUNOFF)
10.46	10.07	(RUNOFF)
11.60	9.26	(RUNOFF)
12.60	9.38	(RUNOFF)

14.11	9.50	(RUNOFF)
18.90	5.53	(RUNOFF)
20.64	4.97	(RUNOFF)
23.53	4.14	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 40

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	930.87	5590.35
10.49	47.07	5581.42
11.81	40.70	5581.24
12.81	41.18	5581.26
14.32	41.55	5581.27
18.96	25.53	5580.83
20.87	21.69	5580.72
21.80	19.21	5580.65
23.66	18.11	5580.62

OPERATION REACH CROSS SECTION 18

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	808.69	5485.03
10.74	46.98	5480.66
12.09	39.34	5480.57
13.10	39.78	5480.57
14.62	39.80	5480.57
19.19	25.51	5480.39
21.17	20.77	5480.33
22.07	18.98	5480.31
23.92	17.63	5480.30

OPERATION RUNOFF CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	155.82	(RUNOFF)
10.46	9.59	(RUNOFF)
11.70	8.30	(RUNOFF)
12.71	8.32	(RUNOFF)
14.22	8.35	(RUNOFF)
18.92	5.23	(RUNOFF)
23.58	3.70	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.73	890.98	5485.49
10.56	56.43	5480.79
12.06	46.07	5480.65

13.05	46.53	5480.66
14.58	46.47	5480.66
19.00	30.71	5480.46
21.16	24.49	5480.38
22.00	22.60	5480.36
23.81	20.53	5480.33

*** WARNING - STRUCTURE 42 DELTA T IS TOO LARGE. O /2 > S /DELTA T OCCURED 2 TIMES STARTING WITH POINT262

OPERATION RESVOR STRUCTURE 42

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
PAGE 5

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.80	858.60	5258.23
10.57	56.42	5250.63
12.08	46.04	5250.51
13.07	46.50	5250.52
14.60	46.43	5250.52
19.02	30.70	5250.34
21.18	24.49	5250.27
22.03	22.59	5250.25
23.83	20.51	5250.23

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 2.61 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .01	.73 4.88 18.09	
6.00	DISCHG 47.94 99.89 180.18 297.39 420.92 565.03 725.93	840.48 858.60 840.17	
7.00	DISCHG 725.63 603.48 487.51 388.94 286.14 233.15 198.07	173.33 157.13 146.22	
8.00	DISCHG 138.79 133.12 128.08 122.93 117.40 111.37 104.78	97.54 89.74 81.98	
9.00	DISCHG 74.99 69.23 64.83 61.65 59.47 58.03 57.12	56.58 56.27 56.13	
10.00	DISCHG 56.08 56.09 56.14 56.21 56.29 56.38 56.42	56.30 55.90 55.04	
11.00	DISCHG 53.61 51.60 49.05 46.22 43.65 41.85 41.15	41.60 42.96 44.54	
12.00	DISCHG 45.70 46.03 45.35 43.89 42.26 41.11 40.85	41.61 43.18 44.93	
13.00	DISCHG 46.17 46.46 45.56 43.57 40.95 38.26 35.93	34.23 33.31 33.27	
14.00	DISCHG 34.14 35.86 38.30 41.17 43.85 45.72 46.43	45.79 43.95 41.41	
15.00	DISCHG 38.74 36.34 34.40 32.95 31.93 31.23 30.77	30.49 30.31 30.21	
16.00	DISCHG 30.16 30.13 30.13 30.14 30.15 30.17 30.19	30.21 30.23 30.25	
17.00	DISCHG 30.27 30.30 30.32 30.34 30.36 30.38 30.40	30.43 30.45 30.47	
18.00	DISCHG 30.49 30.51 30.53 30.56 30.58 30.60 30.62	30.64 30.66 30.68	
19.00	DISCHG 30.70 30.69 30.62 30.42 30.03 29.39 28.46	27.19 25.61 23.86	
20.00	DISCHG 22.10 20.47 19.05 17.95 17.30 17.23 17.78	18.94 20.53 22.18	
21.00	DISCHG 23.52 24.31 24.48 24.11 23.46 22.82 22.38	22.22 22.30 22.47	
22.00	DISCHG 22.59 22.55 22.29 21.83 21.24 20.66 20.14	19.73 19.42 19.21	
23.00	DISCHG 19.06 18.98 18.97 19.04 19.21 19.49 19.86	20.23 20.49 20.43	
24.00	DISCHG 19.82 18.57 16.61 14.05 11.23 8.54 6.23	4.40 3.01 2.01	
25.00	DISCHG 1.31 .84 .52 .32 .19 .11 .06	.03 .01 .01	
26.00	DISCHG .00		

OPERATION RUNOFF CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	179.14	(RUNOFF)

10.45	9.09	(RUNOFF)
11.64	8.13	(RUNOFF)
12.65	8.21	(RUNOFF)
14.15	8.23	(RUNOFF)
18.90	4.93	(RUNOFF)
23.56	3.60	(RUNOFF)

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS 3
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OPERATION REACH CROSS SECTION 21

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.62	133.26	5604.47
10.67	9.07	5600.54
11.95	7.60	5600.46
12.96	7.62	5600.46
14.50	7.49	5600.45
19.16	4.92	5600.30
23.83	3.41	5600.20

OPERATION RESVOR STRUCTURE 39

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.67	131.60	5605.56
10.68	9.07	5600.70
11.97	7.59	5600.58
12.98	7.62	5600.59
14.51	7.49	5600.58
19.16	4.92	5600.38
23.85	3.40	5600.26

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .41 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .30		
6.00	DISCHG 2.67 11.32 29.96 56.71 88.82 112.44 128.92 131.16 122.81 109.22		
7.00	DISCHG 94.51 80.47 64.52 55.46 46.84 40.50 35.47 31.72 28.87 26.67		
8.00	DISCHG 24.68 23.16 21.86 20.74 19.66 18.47 17.12 15.70 14.33 13.13		
9.00	DISCHG 12.14 11.34 10.72 10.24 9.89 9.62 9.43 9.29 9.20 9.13		
10.00	DISCHG 9.09 9.06 9.05 9.05 9.05 9.05 9.06 9.07 9.05 8.94		
11.00	DISCHG 8.66 8.22 7.68 7.13 6.74 6.59 6.69 6.97 7.30 7.54		
12.00	DISCHG 7.58 7.40 7.07 6.70 6.43 6.38 6.55 6.89 7.26 7.55		
13.00	DISCHG 7.61 7.45 7.13 6.72 6.33 5.98 5.69 5.46 5.31 5.30		
14.00	DISCHG 5.49 5.89 6.41 6.94 7.33 7.49 7.38 7.10 6.73 6.36		
15.00	DISCHG 6.02 5.74 5.52 5.34 5.20 5.10 5.02 4.96 4.92 4.89		
16.00	DISCHG 4.87 4.86 4.85 4.84 4.84 4.84 4.84 4.84 4.84 4.85		
17.00	DISCHG 4.85 4.85 4.86 4.86 4.86 4.87 4.87 4.87 4.88 4.88		
18.00	DISCHG 4.88 4.89 4.89 4.89 4.90 4.90 4.90 4.91 4.91 4.91		
19.00	DISCHG 4.92 4.92 4.92 4.91 4.86 4.74 4.54 4.31 4.05 3.80		
20.00	DISCHG 3.54 3.28 3.04 2.84 2.73 2.77 2.94 3.21 3.51 3.74		
21.00	DISCHG 3.87 3.88 3.81 3.70 3.60 3.54 3.54 3.58 3.64 3.67		
22.00	DISCHG 3.67 3.62 3.55 3.45 3.36 3.29 3.22 3.17 3.13 3.10		
23.00	DISCHG 3.08 3.06 3.05 3.04 3.06 3.12 3.20 3.31 3.39 3.39		
24.00	DISCHG 3.24 2.94 2.53 2.09 1.68 1.32 1.02 .78 .58 .43		

25.00	DISCHG	.32	.23	.17	.12	.09	.06	.04	.03	.02	.01
26.00	DISCHG	.01	.00								

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
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OPERATION REACH CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.91	116.74	5463.87
10.78	9.07	5460.45
13.17	7.40	5460.37
14.73	7.20	5460.36
19.30	4.92	5460.25
24.01	3.33	5460.17

OPERATION RUNOFF CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	391.58	(RUNOFF)
10.39	9.63	(RUNOFF)
11.52	9.28	(RUNOFF)
12.52	9.35	(RUNOFF)
14.02	9.38	(RUNOFF)
18.89	4.98	(RUNOFF)
20.54	4.75	(RUNOFF)
23.47	3.84	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	392.34	5466.62
6.84	144.82	5464.15
11.44	16.69	5460.72
12.48	16.13	5460.70
14.01	14.87	5460.66
14.68	12.21	5460.57
18.95	9.90	5460.50
20.49	7.72	5460.39
21.47	7.61	5460.38
23.47	6.90	5460.35

OPERATION ADDEYD CROSS SECTION 18

1

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.80	1003.07	5486.12
10.46	75.10	5481.05
12.22	59.43	5480.83
13.07	58.95	5480.83
14.61	58.61	5480.82
18.96	40.60	5480.58
21.24	31.64	5480.47
22.00	29.31	5480.44
23.57	26.52	5480.41

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 6 BY 3.0 CFS

OPERATION REACH CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.98	963.68	5328.02
10.57	75.05	5321.45
12.38	59.08	5321.10
13.22	58.44	5321.09
14.78	57.76	5321.07
19.07	40.57	5320.76
21.43	31.24	5320.62
23.70	26.30	5320.54

OPERATION RUNOFF CROSS SECTION 6

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	307.43	(RUNOFF)
10.45	11.59	(RUNOFF)
11.58	10.73	(RUNOFF)
12.58	10.83	(RUNOFF)
14.09	10.91	(RUNOFF)
18.90	6.16	(RUNOFF)
20.61	5.61	(RUNOFF)
21.58	4.78	(RUNOFF)
23.51	4.61	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 6

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	709.45	5326.09
6.97	1001.53	5328.31
10.46	86.58	5321.70
12.50	69.16	5321.32
13.19	64.82	5321.23
14.76	64.09	5321.21
18.97	46.70	5320.85
21.47	35.88	5320.69

23.58

30.63

5320.61

OPERATION RESVOR STRUCTURE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	709.63	5352.62
6.98	1001.07	5353.37
10.49	86.76	5350.37
12.50	69.23	5350.30
13.18	64.77	5350.28
14.76	64.08	5350.27
18.97	46.70	5350.20
21.47	35.88	5350.15
23.59	30.63	5350.13

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.18	9.20	59.55	186.37
6.00	DISCHG	378.36	579.37	702.38	704.80	659.40	645.69	700.56	806.87	918.14	980.90
7.00	DISCHG	998.95	946.21	849.79	738.76	625.51	513.51	423.30	359.90	309.02	274.39
8.00	DISCHG	246.85	229.36	212.69	199.69	185.22	174.86	163.77	155.59	145.56	137.30
9.00	DISCHG	127.21	119.31	110.71	104.91	98.96	95.66	92.07	90.60	88.57	88.16
10.00	DISCHG	87.00	87.12	86.43	86.78	86.33	86.76	86.19	85.60	83.16	80.91
11.00	DISCHG	78.14	76.45	74.80	74.47	73.59	72.69	70.81	69.00	66.48	64.94
12.00	DISCHG	64.13	64.65	65.64	67.49	68.71	69.23	68.66	67.58	65.80	64.62
13.00	DISCHG	64.20	64.62	64.76	64.43	63.00	60.95	58.50	56.99	56.70	57.45
14.00	DISCHG	58.37	59.36	59.90	60.09	60.41	61.48	62.83	63.90	63.99	63.08
15.00	DISCHG	61.13	58.71	56.08	53.72	51.65	50.06	48.79	47.91	47.24	46.82
16.00	DISCHG	46.49	46.32	46.17	46.12	46.05	46.06	46.04	46.06	46.06	46.10
17.00	DISCHG	46.11	46.15	46.16	46.20	46.22	46.26	46.28	46.32	46.34	46.38
18.00	DISCHG	46.40	46.44	46.46	46.49	46.52	46.56	46.58	46.61	46.64	46.67
19.00	DISCHG	46.69	46.62	46.21	45.32	44.20	43.15	42.11	40.84	39.14	37.11
20.00	DISCHG	34.96	32.97	31.59	31.01	30.90	30.85	30.80	30.73	30.72	31.07
21.00	DISCHG	31.89	33.03	34.21	35.21	35.78	35.86	35.54	34.97	34.28	33.70
22.00	DISCHG	33.37	33.24	33.12	32.91	32.54	32.02	31.43	30.83	30.29	29.84
23.00	DISCHG	29.49	29.28	29.29	29.57	29.99	30.40	30.63	30.21	29.02	27.51
24.00	DISCHG	26.19	25.01	23.62	21.75	19.32	16.47	13.50	10.66	8.17	6.10
25.00	DISCHG	4.45	3.20	2.26	1.57	1.08	.74	.50	.34	.22	.15
26.00	DISCHG	.10	.06	.04	.03	.01	.01	.00			

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

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OPERATION RESVOR STRUCTURE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	709.82	5342.94
6.98	1000.44	5344.00
10.56	86.64	5340.39
12.49	69.04	5340.31
13.19	64.91	5340.29
14.77	64.13	5340.29
18.98	46.71	5340.21
21.47	35.88	5340.16

23.59

30.63

5340.14

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.18	8.97	58.45	184.09	
6.00	DISCHG	375.49	571.67	700.98	705.86	661.47	644.80	697.73	802.34	914.76	979.71
7.00	DISCHG	998.80	949.81	853.00	743.27	629.04	517.81	424.47	360.46	309.83	274.53
8.00	DISCHG	247.43	229.27	213.22	199.53	185.75	174.64	164.27	155.32	146.08	137.03
9.00	DISCHG	127.73	119.03	111.21	104.59	99.42	95.31	92.49	90.24	88.97	87.79
10.00	DISCHG	87.38	86.76	86.79	86.43	86.67	86.42	86.52	85.30	83.51	80.64
11.00	DISCHG	78.47	76.18	75.10	74.19	73.88	72.45	71.09	68.78	66.75	64.72
12.00	DISCHG	64.36	64.42	65.83	67.26	68.89	69.04	68.85	67.43	65.99	64.47
13.00	DISCHG	64.36	64.45	64.91	64.30	63.16	60.85	58.66	56.88	56.81	57.33
14.00	DISCHG	58.46	59.24	60.00	60.00	60.49	61.37	62.89	63.81	64.08	63.02
15.00	DISCHG	61.23	58.68	56.19	53.69	51.74	50.02	48.86	47.87	47.30	46.77
16.00	DISCHG	46.54	46.27	46.22	46.07	46.10	46.02	46.07	46.03	46.10	46.07
17.00	DISCHG	46.14	46.12	46.19	46.18	46.25	46.23	46.30	46.30	46.36	46.36
18.00	DISCHG	46.42	46.42	46.48	46.48	46.54	46.54	46.59	46.60	46.65	46.66
19.00	DISCHG	46.70	46.61	46.23	45.32	44.22	43.15	42.13	40.85	39.18	37.13
20.00	DISCHG	35.00	32.98	31.61	31.01	30.90	30.84	30.81	30.73	30.73	31.05
21.00	DISCHG	31.88	33.01	34.20	35.19	35.78	35.86	35.55	34.98	34.29	33.71
22.00	DISCHG	33.38	33.23	33.13	32.91	32.55	32.03	31.44	30.84	30.30	29.85
23.00	DISCHG	29.50	29.28	29.29	29.56	29.99	30.39	30.63	30.22	29.04	27.53
24.00	DISCHG	26.21	25.02	23.64	21.78	19.36	16.51	13.54	10.70	8.20	6.13
25.00	DISCHG	4.47	3.21	2.27	1.58	1.09	.74	.50	.34	.22	.15
26.00	DISCHG	.10	.06	.04	.03	.02	.01	.00			

OPERATION RESVOR STRUCTURE 33

1

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRGD : P3S1_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	709.59	5323.03
6.98	1000.05	5324.00
10.57	86.69	5320.43
12.50	69.11	5320.35
13.19	64.83	5320.32
14.76	64.07	5320.32
18.94	46.69	5320.23
21.47	35.89	5320.18
23.59	30.63	5320.15

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.17	8.72	57.24	181.55	
6.00	DISCHG	372.27	563.50	700.32	706.15	663.91	643.67	695.52	797.94	911.81	978.37
7.00	DISCHG	998.82	952.76	856.28	747.04	632.65	521.38	426.99	360.86	310.93	274.53
8.00	DISCHG	248.23	229.05	213.90	199.29	186.38	174.37	164.83	155.06	146.59	136.81
9.00	DISCHG	128.21	118.83	111.62	104.40	99.75	95.11	92.76	90.05	89.18	87.63
10.00	DISCHG	87.55	86.62	86.92	86.32	86.77	86.34	86.60	85.26	83.60	80.64
11.00	DISCHG	78.53	76.19	75.12	74.20	73.88	72.48	71.10	68.85	66.75	64.78
12.00	DISCHG	64.32	64.46	65.75	67.30	68.81	69.11	68.79	67.53	65.94	64.56
13.00	DISCHG	64.27	64.53	64.83	64.40	63.10	60.97	58.61	56.98	56.72	57.40
14.00	DISCHG	58.36	59.32	59.91	60.08	60.40	61.44	62.79	63.88	64.00	63.12
15.00	DISCHG	61.19	58.79	56.15	53.79	51.69	50.11	48.81	47.95	47.24	46.84

16.00	DISCHG	46.49	46.34	46.16	46.13	46.04	46.07	46.02	46.08	46.05	46.11
17.00	DISCHG	46.09	46.16	46.15	46.22	46.21	46.28	46.26	46.33	46.32	46.39
18.00	DISCHG	46.38	46.45	46.44	46.51	46.50	46.57	46.57	46.63	46.62	46.68
19.00	DISCHG	46.68	46.63	46.22	45.36	44.22	43.19	42.13	40.89	39.19	37.19
20.00	DISCHG	35.02	33.03	31.61	31.03	30.89	30.86	30.79	30.75	30.71	31.06
21.00	DISCHG	31.85	33.00	34.17	35.19	35.77	35.87	35.55	35.00	34.29	33.72
22.00	DISCHG	33.37	33.24	33.12	32.92	32.55	32.04	31.44	30.85	30.30	29.86
23.00	DISCHG	29.50	29.28	29.28	29.56	29.98	30.39	30.62	30.24	29.06	27.56
24.00	DISCHG	26.22	25.05	23.66	21.82	19.39	16.56	13.58	10.74	8.23	6.16
25.00	DISCHG	4.49	3.23	2.28	1.59	1.09	.75	.50	.34	.22	.15
26.00	DISCHG	.10	.06	.04	.03	.01	.01	.00			

OPERATION RESVOR STRUCTURE 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	709.13	5313.73
6.98	999.58	5314.74
10.47	86.60	5310.46
12.50	69.28	5310.36
13.17	64.71	5310.34
14.75	64.04	5310.34
18.97	46.69	5310.25
21.47	35.88	5310.19
23.59	30.63	5310.16

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 PASS :
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TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.77 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.17	8.51	56.23	179.41
6.00	DISCHG	369.55	552.75	699.83	706.15	666.91	642.53	692.81	793.16	908.39	976.91
7.00	DISCHG	998.73	955.90	859.97	751.15	637.25	525.33	430.30	361.85	311.23	275.15
8.00	DISCHG	248.29	229.47	213.88	199.68	186.33	174.71	164.74	155.39	146.49	137.15
9.00	DISCHG	128.11	119.17	111.48	104.71	99.57	95.40	92.55	90.32	88.94	87.89
10.00	DISCHG	87.30	86.88	86.67	86.57	86.52	86.59	86.36	85.53	83.38	80.92
11.00	DISCHG	78.33	76.45	74.90	74.43	73.67	72.72	70.91	69.08	66.58	64.99
12.00	DISCHG	64.13	64.64	65.55	67.45	68.63	69.28	68.64	67.70	65.81	64.71
13.00	DISCHG	64.13	64.66	64.70	64.53	63.01	61.11	58.53	57.09	56.62	57.48
14.00	DISCHG	58.26	59.38	59.83	60.15	60.32	61.48	62.71	63.92	63.95	63.19
15.00	DISCHG	61.17	58.87	56.14	53.86	51.68	50.15	48.80	47.98	47.23	46.87
16.00	DISCHG	46.47	46.35	46.15	46.14	46.03	46.08	46.02	46.08	46.04	46.12
17.00	DISCHG	46.09	46.16	46.15	46.22	46.21	46.27	46.27	46.33	46.33	46.38
18.00	DISCHG	46.39	46.44	46.45	46.50	46.51	46.56	46.58	46.61	46.64	46.67
19.00	DISCHG	46.69	46.62	46.23	45.36	44.24	43.19	42.15	40.90	39.22	37.20
20.00	DISCHG	35.06	33.04	31.63	31.02	30.90	30.85	30.80	30.74	30.72	31.04
21.00	DISCHG	31.85	32.98	34.16	35.17	35.78	35.86	35.56	35.00	34.31	33.72
22.00	DISCHG	33.39	33.23	33.13	32.92	32.56	32.04	31.46	30.85	30.32	29.86
23.00	DISCHG	29.51	29.28	29.29	29.55	29.98	30.38	30.63	30.25	29.08	27.57
24.00	DISCHG	26.24	25.06	23.69	21.84	19.43	16.60	13.62	10.77	8.27	6.18
25.00	DISCHG	4.52	3.24	2.29	1.59	1.10	.75	.51	.34	.23	.15
26.00	DISCHG	.10	.06	.04	.02	.02	.01	.00			

OPERATION RESVOR STRUCTURE 31

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	712.11	5302.85
6.98	997.22	5303.99
9.87	88.84	5300.36
10.09	87.66	5300.35
10.30	87.28	5300.35
10.50	87.24	5300.35
10.66	86.42	5300.35
11.27	74.98	5300.30
12.50	69.53	5300.28
13.26	64.87	5300.26

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 3.77 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .16	8.35 55.47 177.80	
6.00	DISCHG 367.49 549.38 694.76 710.32 665.35 645.26 687.62	792.26 902.86 978.07	
7.00	DISCHG 996.50 960.24 861.37 755.87 639.30 529.65 429.07	364.33 309.80 277.21	
8.00	DISCHG 246.82 231.24 212.47 201.30 185.03 176.19 163.51	156.75 145.35 138.42	
9.00	DISCHG 127.05 120.35 110.49 105.79 98.63 96.39 91.65	91.23 88.10 88.72	
10.00	DISCHG 86.51 87.65 85.93 87.28 85.84 87.24 85.73	86.14 82.83 81.49	
11.00	DISCHG 77.82 76.97 74.43 74.89 73.24 73.15 70.52	69.48 66.24 65.35	
12.00	DISCHG 63.80 64.94 65.24 67.71 68.36 69.53 68.41	67.94 65.62 64.92	

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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JOB 1 PASS 3
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13.00	DISCHG	63.94	64.83	64.53	64.69	62.88	61.27	58.43	57.22	56.51	57.57
14.00	DISCHG	58.16	59.46	59.74	60.23	60.24	61.53	62.64	63.97	63.91	63.25
15.00	DISCHG	61.16	58.93	56.14	53.91	51.68	50.19	48.79	48.00	47.22	46.88
16.00	DISCHG	46.47	46.36	46.14	46.15	46.03	46.08	46.02	46.08	46.05	46.11
17.00	DISCHG	46.10	46.16	46.15	46.21	46.21	46.26	46.28	46.32	46.34	46.38
18.00	DISCHG	46.40	46.43	46.46	46.49	46.52	46.55	46.58	46.61	46.64	46.67
19.00	DISCHG	46.70	46.62	46.25	45.37	44.26	43.20	42.17	40.91	39.25	37.22
20.00	DISCHG	35.08	33.06	31.64	31.02	30.90	30.85	30.81	30.73	30.73	31.03
21.00	DISCHG	31.84	32.96	34.15	35.16	35.77	35.86	35.57	35.00	34.32	33.72
22.00	DISCHG	33.39	33.23	33.14	32.92	32.57	32.05	31.46	30.86	30.32	29.86
23.00	DISCHG	29.51	29.28	29.28	29.55	29.97	30.38	30.62	30.26	29.10	27.59
24.00	DISCHG	26.25	25.07	23.70	21.86	19.46	16.63	13.65	10.80	8.29	6.20
25.00	DISCHG	4.53	3.25	2.30	1.60	1.10	.75	.51	.34	.23	.15
26.00	DISCHG	.10	.06	.04	.03	.02	.01	.00			

OPERATION RUNOFF CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	229.71	(RUNOFF)
10.45	11.55	(RUNOFF)
11.64	10.41	(RUNOFF)
12.64	10.52	(RUNOFF)
14.14	10.59	(RUNOFF)
18.91	6.29	(RUNOFF)
20.67	5.49	(RUNOFF)
23.55	4.63	(RUNOFF)

OPERATION REACH CROSS SECTION 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	174.61	5323.90
10.57	11.53	5320.44
11.84	9.76	5320.39
12.84	9.83	5320.39
14.37	9.71	5320.39
19.06	6.28	5320.25
23.72	4.40	5320.18

OPERATION RESVOR STRUCTURE 45

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TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	174.98	5342.33
10.52	11.53	5340.17
11.84	9.75	5340.14
12.85	9.83	5340.15
14.37	9.71	5340.14
19.06	6.28	5340.09
23.72	4.40	5340.06

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .54 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00	.00 .00 .00 .00 .00 .00	.02 .57 4.18
6.00 DISCHG	17.41 46.94 90.91 136.88 166.03 174.97	164.45 145.61 123.57 103.99	
7.00 DISCHG	85.95 71.76 59.72 51.06 43.99 39.33	35.46 33.07 30.75 29.21	
8.00 DISCHG	27.47 26.35 24.99 23.93 22.27 20.66	18.71 17.13 15.59 14.56	
9.00 DISCHG	13.59 13.02 12.45 12.18 11.86 11.76	11.58 11.57 11.47 11.50	
10.00 DISCHG	11.44 11.48 11.45 11.50 11.48 11.53	11.51 11.50 11.28 10.85	
11.00 DISCHG	10.16 9.40 8.68 8.26 8.18 8.48	8.94 9.45 9.73 9.70	
12.00 DISCHG	9.34 8.82 8.29 8.01 8.04 8.40	8.93 9.47 9.79 9.78	
13.00 DISCHG	9.43 8.91 8.33 7.81 7.36 7.02	6.75 6.62 6.69 7.07	
14.00 DISCHG	7.70 8.47 9.18 9.63 9.69 9.42	8.93 8.38 7.87 7.45	
15.00 DISCHG	7.10 6.84 6.64 6.49 6.39 6.31	6.26 6.22 6.19 6.18	
16.00 DISCHG	6.17 6.16 6.16 6.16 6.16 6.17	6.17 6.17 6.18 6.18	
17.00 DISCHG	6.19 6.19 6.20 6.20 6.20 6.21	6.21 6.22 6.22 6.23	
18.00 DISCHG	6.23 6.24 6.24 6.25 6.25 6.26	6.26 6.26 6.27 6.27	
19.00 DISCHG	6.28 6.28 6.26 6.17 5.97 5.68	5.34 4.99 4.66 4.32	
20.00 DISCHG	3.99 3.68 3.45 3.37 3.50 3.82	4.23 4.65 4.94 5.05	
21.00 DISCHG	5.01 4.86 4.68 4.55 4.49 4.51	4.59 4.67 4.71 4.69	
22.00 DISCHG	4.60 4.48 4.35 4.23 4.14 4.06	4.00 3.96 3.92 3.90	
23.00 DISCHG	3.88 3.87 3.88 3.92 4.01 4.14	4.29 4.40 4.35 4.07	
24.00 DISCHG	3.58 2.98 2.38 1.85 1.41 1.05	.77 .56 .40 .29	
25.00 DISCHG	.20 .14 .10 .06 .04 .03	.02 .01 .01 .00	

OPERATION RESVOR STRUCTURE 44

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	174.89	5342.53
10.59	11.56	5340.21
11.83	9.77	5340.17

12.84	9.83	5340.18
14.37	9.71	5340.17
19.06	6.28	5340.11
23.72	4.40	5340.08

TIME(HRS)	FIRST HYDROGRAPH POINT =				.00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA =		.54 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.00	.02	.55	4.05		
6.00	DISCHG	16.98	46.12	89.85	135.55	165.54	174.89	165.12	146.10	124.40	104.25				
7.00	DISCHG	86.47	71.88	60.11	51.06	44.28	39.26	35.68	32.96	30.95	29.10				

TR20 XEQ 03-26-99 09:06	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 3
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT		PAGE 61

8.00	DISCHG	27.65	26.23	25.16	23.82	22.43	20.58	18.87	17.05	15.73	14.48
9.00	DISCHG	13.70	12.94	12.55	12.10	11.95	11.69	11.66	11.50	11.54	11.43
10.00	DISCHG	11.50	11.42	11.50	11.45	11.53	11.48	11.56	11.46	11.32	10.83
11.00	DISCHG	10.21	9.39	8.73	8.24	8.21	8.44	8.95	9.41	9.75	9.68
12.00	DISCHG	9.37	8.82	8.32	7.99	8.05	8.38	8.93	9.45	9.80	9.77
13.00	DISCHG	9.45	8.91	8.35	7.81	7.38	7.02	6.76	6.61	6.69	7.05
14.00	DISCHG	7.69	8.45	9.17	9.62	9.70	9.42	8.95	8.39	7.89	7.45
15.00	DISCHG	7.11	6.84	6.65	6.49	6.39	6.31	6.26	6.22	6.20	6.18
16.00	DISCHG	6.17	6.16	6.16	6.16	6.16	6.17	6.17	6.17	6.18	6.18
17.00	DISCHG	6.19	6.19	6.20	6.20	6.21	6.21	6.21	6.22	6.22	6.23
18.00	DISCHG	6.23	6.24	6.24	6.25	6.25	6.25	6.26	6.26	6.27	6.27
19.00	DISCHG	6.28	6.28	6.26	6.17	5.98	5.68	5.35	5.00	4.66	4.33
20.00	DISCHG	4.00	3.69	3.46	3.37	3.50	3.81	4.22	4.64	4.93	5.05
21.00	DISCHG	5.01	4.86	4.68	4.55	4.49	4.51	4.59	4.67	4.71	4.69
22.00	DISCHG	4.61	4.48	4.35	4.24	4.14	4.06	4.00	3.96	3.92	3.90
23.00	DISCHG	3.88	3.87	3.88	3.91	4.00	4.14	4.29	4.39	4.35	4.08
24.00	DISCHG	3.59	2.99	2.39	1.86	1.41	1.06	.78	.57	.41	.29
25.00	DISCHG	.20	.14	.10	.07	.04	.03	.02	.01	.01	.00

OPERATION RESVOR STRUCTURE 43

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.51	174.47	5323.73
10.53	11.53	5320.31
11.85	9.75	5320.26
12.85	9.83	5320.26
14.37	9.71	5320.26
19.06	6.28	5320.17
23.73	4.40	5320.12

TIME(HRS)	FIRST HYDROGRAPH POINT =				.00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA =		.54 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.01	.52	3.86			
6.00	DISCHG	16.35	44.90	87.54	132.21	164.76	174.44	166.56	147.11	126.05	105.23				
7.00	DISCHG	87.70	72.41	60.35	51.40	44.40	39.47	35.72	33.09	30.96	29.20				
8.00	DISCHG	27.64	26.32	25.14	23.91	22.44	20.69	18.87	17.15	15.72	14.57				
9.00	DISCHG	13.67	13.01	12.51	12.17	11.91	11.74	11.61	11.55	11.49	11.48				
10.00	DISCHG	11.45	11.47	11.46	11.49	11.49	11.52	11.52	11.50	11.29	10.88				
11.00	DISCHG	10.20	9.45	8.71	8.28	8.17	8.46	8.91	9.42	9.72	9.71				
12.00	DISCHG	9.36	8.86	8.32	8.02	8.02	8.38	8.90	9.45	9.78	9.79				
13.00	DISCHG	9.45	8.95	8.36	7.84	7.38	7.04	6.76	6.62	6.68	7.04				
14.00	DISCHG	7.66	8.43	9.15	9.62	9.70	9.44	8.96	8.42	7.90	7.47				
15.00	DISCHG	7.12	6.85	6.65	6.50	6.39	6.32	6.26	6.22	6.19	6.18				

16.00	DISCHG	6.17	6.16	6.16	6.16	6.16	6.17	6.17	6.17	6.18	6.18
17.00	DISCHG	6.19	6.19	6.20	6.20	6.20	6.21	6.21	6.22	6.22	6.23
18.00	DISCHG	6.23	6.24	6.24	6.25	6.25	6.26	6.26	6.26	6.27	6.27
19.00	DISCHG	6.28	6.28	6.26	6.18	5.98	5.70	5.36	5.01	4.67	4.34
20.00	DISCHG	4.01	3.70	3.46	3.37	3.49	3.80	4.21	4.62	4.92	5.05
21.00	DISCHG	5.01	4.87	4.69	4.55	4.49	4.51	4.58	4.67	4.71	4.69

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

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22.00	DISCHG	4.61	4.49	4.36	4.24	4.14	4.06	4.00	3.96	3.92	3.90
23.00	DISCHG	3.88	3.87	3.88	3.91	4.00	4.13	4.28	4.39	4.36	4.09
24.00	DISCHG	3.61	3.01	2.41	1.87	1.43	1.07	.79	.57	.41	.29
25.00	DISCHG	.21	.14	.10	.07	.04	.03	.02	.01	.01	.00

OPERATION RUNOFF CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	120.83	(RUNOFF)
7.48	10.63	(RUNOFF)
10.45	4.62	(RUNOFF)
11.54	4.43	(RUNOFF)
12.54	4.50	(RUNOFF)
14.04	4.56	(RUNOFF)
18.95	2.52	(RUNOFF)
23.48	1.95	(RUNOFF)

OPERATION REACH CROSS SECTION 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	103.88	5346.95
10.55	4.61	5340.32
11.68	4.31	5340.30
12.69	4.38	5340.31
14.19	4.43	5340.31
19.06	2.51	5340.18
23.61	1.90	5340.13

OPERATION RESVOR STRUCTURE 46

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	104.01	5343.30
10.54	4.60	5340.15
11.69	4.31	5340.14
12.69	4.38	5340.14
14.19	4.43	5340.14
19.06	2.51	5340.08
23.62	1.90	5340.06

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.22 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00	.00 .00 .00	.00 .41 5.46		
6.00	DISCHG	23.63 57.56 93.54 103.83	87.23 63.27 44.72	32.59 24.33 18.89		
7.00	DISCHG	15.20 13.10 11.76 11.13	10.75 10.70 10.61	10.60 10.27 9.86		

8.00	DISCHG	9.41	9.16	8.78	8.08	7.00	6.08	5.38	5.00	4.73	4.62
9.00	DISCHG	4.54	4.52	4.49	4.50	4.49	4.51	4.51	4.53	4.53	4.54
10.00	DISCHG	4.54	4.56	4.56	4.58	4.58	4.60	4.59	4.51	4.18	3.66

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11.00	DISCHG	3.17	2.83	2.70	2.93	3.39	3.85	4.18	4.31	4.08	3.62
12.00	DISCHG	3.16	2.84	2.72	2.95	3.43	3.91	4.24	4.38	4.15	3.67
13.00	DISCHG	3.20	2.87	2.66	2.54	2.47	2.43	2.42	2.50	2.85	3.41
14.00	DISCHG	3.93	4.29	4.43	4.20	3.73	3.26	2.92	2.71	2.59	2.52
15.00	DISCHG	2.48	2.46	2.45	2.44	2.44	2.44	2.44	2.45	2.45	2.45
16.00	DISCHG	2.45	2.45	2.45	2.46	2.46	2.46	2.46	2.46	2.47	2.47
17.00	DISCHG	2.47	2.47	2.47	2.48	2.48	2.48	2.48	2.48	2.48	2.49
18.00	DISCHG	2.49	2.49	2.49	2.49	2.50	2.50	2.50	2.50	2.50	2.51
19.00	DISCHG	2.51	2.51	2.48	2.33	2.09	1.88	1.73	1.62	1.48	1.34
20.00	DISCHG	1.21	1.13	1.14	1.33	1.66	1.98	2.20	2.30	2.24	2.05
21.00	DISCHG	1.86	1.73	1.66	1.69	1.77	1.86	1.93	1.95	1.91	1.80
22.00	DISCHG	1.71	1.63	1.59	1.56	1.55	1.54	1.54	1.53	1.53	1.53
23.00	DISCHG	1.54	1.54	1.56	1.62	1.73	1.83	1.90	1.86	1.60	1.17
24.00	DISCHG	.76	.47	.29	.17	.10	.06	.03	.01	.01	.00

OPERATION RUNOFF CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	381.63	(RUNOFF)
10.41	15.56	(RUNOFF)
11.66	13.77	(RUNOFF)
12.65	13.85	(RUNOFF)
14.16	13.82	(RUNOFF)
18.88	8.21	(RUNOFF)
20.69	7.05	(RUNOFF)
21.64	6.25	(RUNOFF)
23.56	5.94	(RUNOFF)

*** WARNING REACH 22 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 22

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	374.36	5464.25
10.52	15.56	5460.51
11.77	13.71	5460.47
12.77	13.79	5460.48
14.27	13.76	5460.48
18.99	8.21	5460.33
20.81	7.02	5460.28
21.75	6.23	5460.25
23.67	5.92	5460.24

OPERATION RESVOR STRUCTURE 28

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.39	376.23	5254.82
10.53	15.55	5250.32
11.77	13.71	5250.29
12.77	13.79	5250.29
14.28	13.76	5250.29
18.99	8.21	5250.17
20.81	7.03	5250.15
21.76	6.23	5250.13
23.67	5.91	5250.12

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .56 SQ.MI.
5.00	DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .00 .53 7.80 34.78		
6.00	DISCHG 94.20 180.34 288.45 352.21 375.59 333.91 268.63 197.09 152.70 116.56		
7.00	DISCHG 93.43 73.05 62.99 53.04 49.01 44.14 42.62 40.06 39.02 36.62		
8.00	DISCHG 35.17 33.25 32.17 30.20 27.94 24.89 22.27 19.95 18.48 17.37		
9.00	DISCHG 16.72 16.23 15.97 15.74 15.64 15.54 15.51 15.47 15.47 15.46		
10.00	DISCHG 15.47 15.48 15.50 15.52 15.54 15.55 15.55 15.40 14.89 13.88		
11.00	DISCHG 12.56 11.28 10.36 10.11 10.64 11.65 12.72 13.51 13.68 13.08		
12.00	DISCHG 12.04 10.96 10.15 9.99 10.60 11.66 12.77 13.61 13.76 13.17		
13.00	DISCHG 12.13 11.01 10.03 9.35 8.91 8.60 8.41 8.43 8.90 9.91		
14.00	DISCHG 11.23 12.56 13.52 13.74 13.19 12.18 11.05 10.10 9.43 8.98		
15.00	DISCHG 8.68 8.48 8.34 8.26 8.20 8.16 8.13 8.12 8.11 8.10		
16.00	DISCHG 8.10 8.10 8.10 8.10 8.11 8.11 8.12 8.12 8.12 8.13		
17.00	DISCHG 8.13 8.13 8.14 8.14 8.15 8.15 8.15 8.16 8.16 8.16		
18.00	DISCHG 8.17 8.17 8.18 8.18 8.18 8.19 8.19 8.19 8.20 8.20		
19.00	DISCHG 8.21 8.20 8.13 7.92 7.49 6.93 6.38 5.88 5.45 5.01		
20.00	DISCHG 4.59 4.23 4.02 4.16 4.68 5.43 6.20 6.80 7.02 6.89		
21.00	DISCHG 6.53 6.12 5.78 5.64 5.69 5.86 6.06 6.21 6.22 6.09		
22.00	DISCHG 5.86 5.62 5.41 5.27 5.17 5.11 5.07 5.04 5.02 5.01		
23.00	DISCHG 5.00 5.00 5.03 5.13 5.33 5.58 5.82 5.90 5.61 4.88		
24.00	DISCHG 3.87 2.85 1.99 1.38 .95 .65 .44 .30 .20 .13		
25.00	DISCHG .09 .06 .03 .02 .01 .00		

OPERATION REACH CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.58	320.32	5326.32
10.66	15.54	5320.78
11.95	13.11	5320.70
12.96	13.17	5320.70
14.48	13.02	5320.70
19.13	8.20	5320.49
21.93	6.13	5320.37
23.83	5.71	5320.34

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OPERATION RUNOFF CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	372.64	(RUNOFF)
10.40	10.86	(RUNOFF)
11.57	10.17	(RUNOFF)
12.57	10.23	(RUNOFF)
14.07	10.29	(RUNOFF)
18.87	5.64	(RUNOFF)
20.59	5.22	(RUNOFF)
23.50	4.24	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 10

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	462.95	5327.89
10.45	26.39	5321.13
11.65	21.36	5320.97
12.66	21.35	5320.97
14.21	20.73	5320.95
18.92	13.83	5320.72
21.59	10.21	5320.61
23.56	9.51	5320.57

OPERATION RESVOR STRUCTURE 97

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.02	199.35	5345.98
14.53	19.30	5340.88
21.08	10.32	5340.47
23.67	9.13	5340.42

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .91 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.16	1.65	7.55	21.79
6.00	DISCHG	45.98	70.52	98.86	126.34	144.68	160.23	174.08	185.40	193.33	197.80
7.00	DISCHG	199.33	198.53	195.99	192.22	187.64	182.59	177.29	171.88	166.46	161.08
8.00	DISCHG	155.80	150.63	145.55	140.53	135.54	130.62	124.03	117.45	111.15	105.15
9.00	DISCHG	99.46	94.10	89.07	84.36	79.97	75.90	72.12	68.61	65.37	62.37
10.00	DISCHG	59.60	57.04	54.68	52.50	50.49	48.64	46.91	45.28	43.55	41.31
11.00	DISCHG	39.17	37.13	35.24	33.54	32.07	30.81	29.74	28.82	27.97	27.15
12.00	DISCHG	26.35	25.56	24.83	24.21	23.72	23.35	23.09	22.89	22.69	22.46
13.00	DISCHG	22.18	21.85	21.46	21.00	20.50	19.97	19.45	19.00	18.70	18.56
14.00	DISCHG	18.58	18.72	18.92	19.10	19.23	19.29	19.28	19.17	18.97	18.70
15.00	DISCHG	18.37	18.02	17.66	17.30	16.96	16.63	16.33	16.06	15.81	15.58
16.00	DISCHG	15.38	15.20	15.03	14.88	14.75	14.64	14.54	14.45	14.37	14.29

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TR20 XEQ 03-26-99 09:06
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17.00	DISCHG	14.23	14.18	14.13	14.09	14.05	14.02	13.99	13.96	13.94	13.92
18.00	DISCHG	13.91	13.89	13.88	13.87	13.87	13.86	13.85	13.85	13.85	13.85

19.00	DISCHG	13.84	13.84	13.80	13.72	13.59	13.40	13.17	12.89	12.56	12.17
20.00	DISCHG	11.76	11.34	10.95	10.64	10.41	10.28	10.23	10.24	10.26	10.29
21.00	DISCHG	10.31	10.32	10.30	10.29	10.27	10.26	10.25	10.24	10.23	10.20
22.00	DISCHG	10.15	10.09	10.02	9.93	9.83	9.72	9.61	9.50	9.40	9.30
23.00	DISCHG	9.21	9.13	9.07	9.04	9.04	9.07	9.11	9.12	9.06	8.90
24.00	DISCHG	8.66	8.33	7.94	7.48	6.98	6.44	5.91	5.38	4.88	4.40
25.00	DISCHG	3.96	3.56	3.19	2.85	2.55	2.28	2.03	1.81	1.61	1.44
26.00	DISCHG	1.28	1.14	1.01	.90	.80	.72	.64	.57	.51	.45
27.00	DISCHG	.40	.36	.32	.28	.25	.22	.20	.18	.16	.14
28.00	DISCHG	.13	.11	.10	.09	.08	.07	.06	.06	.05	.04
29.00	DISCHG	.04	.04	.03	.03	.02	.02	.02	.02	.02	.01

OPERATION RESVOR STRUCTURE 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.05	199.17	5322.89
14.58	19.29	5320.37
21.13	10.31	5320.20
23.70	9.11	5320.17

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .91 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.08	.90	4.57	14.59	
6.00	DISCHG	33.73	58.05	84.47	114.87	139.48	154.81	169.12	181.43	190.63	196.35
7.00	DISCHG	198.91	198.93	197.00	193.65	189.34	184.44	179.22	173.85	168.43	163.03
8.00	DISCHG	157.71	152.50	147.32	142.22	137.23	132.29	126.38	119.66	113.27	107.17
9.00	DISCHG	101.37	96.59	91.62	86.75	82.20	77.97	74.04	70.39	67.02	63.89
10.00	DISCHG	61.01	58.34	55.88	53.61	51.51	49.58	47.79	46.11	44.43	42.45
11.00	DISCHG	40.26	38.17	36.20	34.40	32.82	31.45	30.29	29.29	28.40	27.56
12.00	DISCHG	26.75	25.96	25.20	24.53	23.97	23.53	23.22	22.99	22.79	22.58
13.00	DISCHG	22.32	22.02	21.66	21.23	20.76	20.24	19.71	19.23	18.85	18.63
14.00	DISCHG	18.57	18.65	18.82	19.01	19.17	19.26	19.28	19.22	19.07	18.83
15.00	DISCHG	18.54	18.20	17.84	17.48	17.13	16.80	16.49	16.20	15.94	15.70
16.00	DISCHG	15.48	15.29	15.11	14.96	14.82	14.70	14.59	14.49	14.41	14.33
17.00	DISCHG	14.26	14.21	14.15	14.11	14.07	14.03	14.00	13.98	13.95	13.93
18.00	DISCHG	13.92	13.90	13.89	13.88	13.87	13.86	13.86	13.85	13.85	13.85
19.00	DISCHG	13.85	13.84	13.82	13.76	13.65	13.49	13.29	13.03	12.73	12.37
20.00	DISCHG	11.97	11.55	11.15	10.80	10.53	10.35	10.26	10.23	10.25	10.28
21.00	DISCHG	10.30	10.31	10.31	10.30	10.28	10.26	10.25	10.25	10.23	10.21
22.00	DISCHG	10.17	10.12	10.06	9.97	9.88	9.78	9.67	9.56	9.45	9.35
23.00	DISCHG	9.26	9.17	9.10	9.05	9.04	9.05	9.09	9.11	9.09	8.98
24.00	DISCHG	8.78	8.50	8.14	7.71	7.23	6.71	6.18	5.65	5.13	4.65
25.00	DISCHG	4.19	3.76	3.38	3.02	2.70	2.41	2.15	1.92	1.71	1.53
26.00	DISCHG	1.36	1.21	1.08	.96	.85	.76	.68	.60	.54	.48
27.00	DISCHG	.43	.38	.34	.30	.27	.24	.21	.19	.17	.15
28.00	DISCHG	.13	.12	.11	.09	.08	.07	.07	.06	.05	.05
29.00	DISCHG	.04	.04	.03	.03	.03	.02	.02	.02	.02	.01

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REV PC 09/83(.2)

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OPERATION RUNOFF CROSS SECTION 8

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

5.98	528.42	(RUNOFF)
7.45	23.57	(RUNOFF)
10.43	9.46	(RUNOFF)
11.46	9.55	(RUNOFF)
12.46	9.56	(RUNOFF)
13.96	9.59	(RUNOFF)
18.85	4.77	(RUNOFF)
20.46	4.80	(RUNOFF)
23.45	3.84	(RUNOFF)

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 3

EXECUTIVE CONTROL OPERATION ENDJOB

RECORD ID

TR20 XEQ 03-26-99 09:06 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRGD : P3S1_OUT.TXT

JOB 1 SUMMARY
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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 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	1										
XSECTION 54	RUNOFF	.61	7	2	.10	.0	3.80	24.00	1.68	---	6.09	797.88	1312.3
XSECTION 56	RUNOFF	.24	7	2	.10	.0	3.80	24.00	1.88	---	6.07	366.84	1547.9
XSECTION 44	ADDHYD	.84	7	2	.10	.0	3.80	24.00	1.73	5731.27	6.08	1163.44	1376.8
XSECTION 44	REACH	.84	7	2	.10	.0	3.80	24.00	1.73	5730.88	6.20	1116.25	1321.0
XSECTION 44	RUNOFF	.13	7	2	.10	.0	3.80	24.00	1.14	---	6.15	96.82	728.0
XSECTION 44	ADDHYD	.98	7	2	.10	.0	3.80	24.00	1.65	5731.67	6.20	1210.82	1238.1
XSECTION 42	REACH	.98	7	2	.10	.0	3.80	24.00	1.65	5671.95	6.30	1187.86	1214.6
XSECTION 42	RUNOFF	.28	7	2	.10	.0	3.80	24.00	1.23	---	6.18	212.52	761.7
XSECTION 42	ADDHYD	1.26	7	2	.10	.0	3.80	24.00	1.56	5673.47	6.29	1360.41	1082.3
XSECTION 46	RUNOFF	.38	7	2	.10	.0	3.80	24.00	.89	---	6.19	196.23	513.7
XSECTION 42	ADDHYD	1.64	7	2	.10	.0	3.80	24.00	1.40	5674.94	6.28	1527.68	932.1
XSECTION 40	REACH	1.64	7	2	.10	.0	3.80	24.00	1.40	5594.46	6.43	1367.53	834.4
XSECTION 40	RUNOFF	.52	7	2	.10	.0	3.80	24.00	1.14	---	6.21	329.36	635.8
XSECTION 40	ADDHYD	2.16	7	2	.10	.0	3.80	24.00	1.34	5596.52	6.41	1587.30	735.9
XSECTION 18	REACH	2.16	7	2	.10	.0	3.80	24.00	1.34	5488.39	6.58	1409.62	653.5
XSECTION 18	RUNOFF	.45	7	2	.10	.0	3.80	24.00	1.27	---	6.33	256.69	566.7
XSECTION 18	ADDHYD	2.61	7	2	.10	.0	3.80	24.00	1.33	5489.46	6.56	1599.08	612.7
STRUCTURE 42	RESVOR	2.61	7	2	.10	.0	3.80	24.00	1.33	5264.81	6.74	1344.96	515.3

XSECTION	21	RUNOFF	.41	7	2	.10	.0	3.80	24.00	1.35	---	6.24	291.08	710.0
XSECTION	21	REACH	.41	7	2	.10	.0	3.80	24.00	1.35	5605.47	6.49	224.31	547.1
STRUCTURE	39	RESVOR	.41	7	2	.10	.0	3.80	24.00	1.35	5608.85	6.62	207.10	505.1
XSECTION	20	REACH	.41	7	2	.10	.0	3.80	24.00	1.35	5464.63	6.84	193.43	471.8
XSECTION	20	RUNOFF	.30	7	2	.10	.0	3.80	24.00	2.25	---	6.08	539.39	1804.1
XSECTION	20	ADDHYD	.71	7	2	.10	.0	3.80	24.00	1.73	5468.26	6.08	550.57	776.1
XSECTION	18	ADDHYD	3.32	7	2	.10	.0	3.80	24.00	1.41	5489.36	6.73	1581.92	476.6
XSECTION	6	REACH	3.32	7	2	.10	.0	3.80	24.00	1.41	5332.41	6.90	1540.81	464.1
XSECTION	6	RUNOFF	.45	7	2	.10	.0	3.80	24.00	1.61	---	6.16	466.29	1027.1
XSECTION	6	ADDHYD	3.77	7	2	.10	.0	3.80	24.00	1.43	5332.89	6.88	1603.87	425.1
STRUCTURE	35	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.43	5354.65	6.88	1604.94	425.1
STRUCTURE	34	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.44	5345.43	6.89	1605.86	425.0
STRUCTURE	33	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.44	5325.43	6.89	1605.70	425.1
STRUCTURE	32	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.44	5316.48	6.89	1604.77	425.1

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPRD : P3S1_OUT.TXT

JOB 1 SUMMARY
PAGE 1

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

SECTION/ STRUCTURE ID	STANDARD CONTROL OPERATION	DRAINAGE AREA (SQ MI)	RAIN TABLE #	ANTEC MOIST COND	MAIN TIME INCREM (HR)	PRECIPITATION			RUNOFF AMOUNT (IN)	PEAK DISCHARGE				
						BEGIN (HR)	AMOUNT (IN)	DURATION (HR)		ELEVATION (FT)	TIME (HR)	RATE (CFS)	RATE (CSM)	
ALTERNATE 1 STORM 1														
+														
STRUCTURE 31	RESVOR	3.77	7	2	.10	.0	3.80	24.00	1.43	5305.42	6.90	1601.98	424.6	
XSECTION 4	RUNOFF	.54	7	2	.10	.0	3.80	24.00	1.30	---	6.23	374.84	698.0	
XSECTION 4	REACH	.54	7	2	.10	.0	3.80	24.00	1.30	5325.39	6.46	298.95	556.7	
STRUCTURE 45	RESVOR	.54	7	2	.10	.0	3.80	24.00	1.30	5343.37	6.46	298.95	556.7	
STRUCTURE 44	RESVOR	.54	7	2	.10	.0	3.80	24.00	1.30	5343.57	6.46	299.09	557.0	
STRUCTURE 43	RESVOR	.54	7	2	.10	.0	3.80	24.00	1.30	5325.15	6.47	299.14	557.1	
XSECTION 2	RUNOFF	.22	7	2	.10	.0	3.80	24.00	1.25	---	6.12	196.37	892.6	
XSECTION 2	REACH	.22	7	2	.10	.0	3.80	24.00	1.25	5349.58	6.27	170.90	776.8	
STRUCTURE 46	RESVOR	.22	7	2	.10	.0	3.80	24.00	1.25	5344.94	6.27	171.23	778.3	
XSECTION 22	RUNOFF	.56	7	2	.10	.0	3.80	24.00	1.81	---	6.23	564.65	1006.5	
XSECTION 22	REACH	.56	7	2	.10	.0	3.80	24.00	1.81	5465.53	6.34	560.17	998.5	
STRUCTURE 28	RESVOR	.56	7	2	.10	.0	3.80	24.00	1.81	5256.39	6.36	555.92	990.9	
XSECTION 10	REACH	.56	7	2	.10	.0	3.80	24.00	1.81	5328.16	6.56	487.19	868.4	
XSECTION 10	RUNOFF	.35	7	2	.10	.0	3.80	24.00	2.12	---	6.12	524.55	1498.7	
XSECTION 10	ADDHYD	.91	7	2	.10	.0	3.80	24.00	1.93	5330.60	6.24	688.97	756.3	
STRUCTURE 97	RESVOR	.91	7	2	.10	.0	3.80	24.00	1.93	5349.05	7.00	281.09	308.6	
STRUCTURE 24	RESVOR	.91	7	2	.10	.0	3.80	24.00	1.93	5324.10	7.07	280.39	307.8	
XSECTION 8	RUNOFF	.25	7	2	.10	.0	3.80	24.00	3.02	---	5.97	674.23	2696.9	

ALTERNATE 1 STORM 2

XSECTION 54	RUNOFF	.61	7	2	.10	.0	3.50	24.00	1.45	---	6.09	684.06	1125.1
XSECTION 56	RUNOFF	.24	7	2	.10	.0	3.50	24.00	1.64	---	6.07	318.40	1343.4
XSECTION 44	ADDHYD	.84	7	2	.10	.0	3.50	24.00	1.50	5729.91	6.09	1001.27	1184.9
XSECTION 44	REACH	.84	7	2	.10	.0	3.50	24.00	1.50	5729.51	6.20	954.15	1129.2
XSECTION 44	RUNOFF	.13	7	2	.10	.0	3.50	24.00	.95	---	6.16	79.24	595.8
XSECTION 44	ADDHYD	.98	7	2	.10	.0	3.50	24.00	1.43	5730.17	6.20	1031.59	1054.8
XSECTION 42	REACH	.98	7	2	.10	.0	3.50	24.00	1.43	5670.26	6.32	995.64	1018.0
XSECTION 42	RUNOFF	.28	7	2	.10	.0	3.50	24.00	1.03	---	6.18	175.42	628.7
XSECTION 42	ADDHYD	1.26	7	2	.10	.0	3.50	24.00	1.34	5671.49	6.30	1135.43	903.3
XSECTION 46	RUNOFF	.38	7	2	.10	.0	3.50	24.00	.73	---	6.19	155.06	405.9
XSECTION 42	ADDHYD	1.64	7	2	.10	.0	3.50	24.00	1.20	5672.64	6.29	1265.89	772.4
XSECTION 40	REACH	1.64	7	2	.10	.0	3.50	24.00	1.20	5592.13	6.45	1120.59	683.7
XSECTION 40	RUNOFF	.52	7	2	.10	.0	3.50	24.00	.95	---	6.22	268.50	518.3
XSECTION 40	ADDHYD	2.16	7	2	.10	.0	3.50	24.00	1.14	5593.77	6.42	1294.21	600.0
XSECTION 18	REACH	2.16	7	2	.10	.0	3.50	24.00	1.14	5486.88	6.61	1138.89	528.0
XSECTION 18	RUNOFF	.45	7	2	.10	.0	3.50	24.00	1.07	---	6.34	211.55	467.0
XSECTION 18	ADDHYD	2.61	7	2	.10	.0	3.50	24.00	1.13	5487.72	6.59	1289.77	494.2

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REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

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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 2														
+														
STRUCTURE 42	RESVOR	2.61	7	2	.10	.0	3.50	24.00	1.13	5262.00	6.72	1159.75	444.4	
XSECTION 21	RUNOFF	.41	7	2	.10	.0	3.50	24.00	1.14	---	6.25	241.74	589.6	
XSECTION 21	REACH	.41	7	2	.10	.0	3.50	24.00	1.14	5605.02	6.50	183.24	446.9	
STRUCTURE 39	RESVOR	.41	7	2	.10	.0	3.50	24.00	1.14	5607.25	6.60	174.93	426.7	
XSECTION 20	REACH	.41	7	2	.10	.0	3.50	24.00	1.14	5464.31	6.82	161.37	393.6	
XSECTION 20	RUNOFF	.30	7	2	.10	.0	3.50	24.00	1.98	---	6.08	475.29	1589.6	
XSECTION 20	ADDHYD	.71	7	2	.10	.0	3.50	24.00	1.50	5467.53	6.08	483.07	681.3	
XSECTION 18	ADDHYD	3.32	7	2	.10	.0	3.50	24.00	1.21	5488.13	6.72	1361.67	410.3	
XSECTION 6	REACH	3.32	7	2	.10	.0	3.50	24.00	1.21	5330.71	6.88	1317.34	396.9	
XSECTION 6	RUNOFF	.45	7	2	.10	.0	3.50	24.00	1.38	---	6.17	396.16	872.6	
XSECTION 6	ADDHYD	3.77	7	2	.10	.0	3.50	24.00	1.23	5331.14	6.87	1373.55	364.0	
STRUCTURE 35	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.23	5354.23	6.87	1372.27	363.7	
STRUCTURE 34	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.23	5344.88	6.87	1371.96	363.6	
STRUCTURE 33	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.23	5324.88	6.88	1373.08	363.9	
STRUCTURE 32	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.23	5315.90	6.88	1373.95	364.2	

STRUCTURE 31	RESVOR	3.77	7	2	.10	.0	3.50	24.00	1.23	5304.88	6.88	1373.35	364.0
XSECTION 4	RUNOFF	.54	7	2	.10	.0	3.50	24.00	1.10	---	6.24	310.01	577.1
XSECTION 4	REACH	.54	7	2	.10	.0	3.50	24.00	1.10	5324.71	6.47	242.79	452.1
STRUCTURE 45	RESVOR	.54	7	2	.10	.0	3.50	24.00	1.10	5342.89	6.47	242.36	451.3
STRUCTURE 44	RESVOR	.54	7	2	.10	.0	3.50	24.00	1.10	5343.10	6.47	242.42	451.1
STRUCTURE 43	RESVOR	.54	7	2	.10	.0	3.50	24.00	1.10	5324.56	6.49	243.42	453.3
XSECTION 2	RUNOFF	.22	7	2	.10	.0	3.50	24.00	1.05	---	6.12	162.72	739.1
XSECTION 2	REACH	.22	7	2	.10	.0	3.50	24.00	1.05	5348.41	6.28	140.93	640.1
STRUCTURE 46	RESVOR	.22	7	2	.10	.0	3.50	24.00	1.05	5344.31	6.28	141.00	640.9
XSECTION 22	RUNOFF	.56	7	2	.10	.0	3.50	24.00	1.57	---	6.24	484.15	863.0
XSECTION 22	REACH	.56	7	2	.10	.0	3.50	24.00	1.57	5464.96	6.35	479.09	854.1
STRUCTURE 28	RESVOR	.56	7	2	.10	.0	3.50	24.00	1.57	5255.74	6.37	476.41	849.2
XSECTION 10	REACH	.56	7	2	.10	.0	3.50	24.00	1.57	5327.34	6.57	413.05	736.1
XSECTION 10	RUNOFF	.35	7	2	.10	.0	3.50	24.00	1.86	---	6.13	458.38	1309.1
XSECTION 10	ADDHYD	.91	7	2	.10	.0	3.50	24.00	1.68	5329.39	6.24	588.99	646.5
STRUCTURE 97	RESVOR	.91	7	2	.10	.0	3.50	24.00	1.68	5347.69	7.00	250.63	275.1
STRUCTURE 24	RESVOR	.91	7	2	.10	.0	3.50	24.00	1.68	5323.51	7.03	250.48	275.0
XSECTION 8	RUNOFF	.25	7	2	.10	.0	3.50	24.00	2.73	---	5.97	611.77	2447.1

ALTERNATE		1	STORM	3										
+														
XSECTION 54	RUNOFF	.61	7	2	.10	.0	3.10	24.00	1.16	---	6.10	538.59	885.1	
XSECTION 56	RUNOFF	.24	7	2	.10	.0	3.10	24.00	1.32	---	6.08	255.85	1079.1	

TR20 XEQ 03-26-99 09:06	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	SUMMARY
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT		PAGE 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 3														
+														
XSECTION 44	ADDHYD	.84	7	2	.10	.0	3.10	24.00	1.20	5728.16	6.09	793.38	938.9	
XSECTION 44	REACH	.84	7	2	.10	.0	3.10	24.00	1.20	5727.78	6.21	747.13	884.2	
XSECTION 44	RUNOFF	.13	7	2	.10	.0	3.10	24.00	.72	---	6.17	57.60	433.1	
XSECTION 44	ADDHYD	.98	7	2	.10	.0	3.10	24.00	1.14	5728.25	6.21	803.45	821.5	
XSECTION 42	REACH	.98	7	2	.10	.0	3.10	24.00	1.14	5668.10	6.34	749.84	766.7	
XSECTION 42	RUNOFF	.28	7	2	.10	.0	3.10	24.00	.79	---	6.19	129.43	463.9	
XSECTION 42	ADDHYD	1.26	7	2	.10	.0	3.10	24.00	1.06	5668.97	6.32	849.41	675.7	
XSECTION 46	RUNOFF	.38	7	2	.10	.0	3.10	24.00	.54	---	6.20	105.64	276.5	
XSECTION 42	ADDHYD	1.64	7	2	.10	.0	3.10	24.00	.94	5669.74	6.31	936.39	571.3	
XSECTION 40	REACH	1.64	7	2	.10	.0	3.10	24.00	.94	5589.26	6.48	815.22	497.4	

XSECTION	40	RUNOFF	.52	7	2	.10	.0	3.10	24.00	.72	---	6.23	193.89	374.3
XSECTION	40	ADDHYD	2.16	7	2	.10	.0	3.10	24.00	.89	5590.35	6.45	930.87	431.6
XSECTION	18	REACH	2.16	7	2	.10	.0	3.10	24.00	.89	5485.03	6.75	808.69	374.9
XSECTION	18	RUNOFF	.45	7	2	.10	.0	3.10	24.00	.83	---	6.35	155.82	344.0
XSECTION	18	ADDHYD	2.61	7	2	.10	.0	3.10	24.00	.88	5485.49	6.73	890.98	341.4
STRUCTURE	42	RESVOR	2.61	7	2	.10	.0	3.10	24.00	.88	5258.23	6.80	858.60	329.0
XSECTION	21	RUNOFF	.41	7	2	.10	.0	3.10	24.00	.89	---	6.26	179.14	436.9
XSECTION	21	REACH	.41	7	2	.10	.0	3.10	24.00	.89	5604.47	6.62	133.26	325.0
STRUCTURE	39	RESVOR	.41	7	2	.10	.0	3.10	24.00	.89	5605.56	6.67	131.60	321.0
XSECTION	20	REACH	.41	7	2	.10	.0	3.10	24.00	.89	5463.87	6.91	116.74	284.7
XSECTION	20	RUNOFF	.30	7	2	.10	.0	3.10	24.00	1.64	---	6.08	391.58	1309.6
XSECTION	20	ADDHYD	.71	7	2	.10	.0	3.10	24.00	1.21	5466.62	6.08	392.34	553.4
XSECTION	18	ADDHYD	3.32	7	2	.10	.0	3.10	24.00	.95	5486.12	6.80	1003.07	302.2
XSECTION	6	REACH	3.32	7	2	.10	.0	3.10	24.00	.95	5328.02	6.98	963.68	290.4
XSECTION	6	RUNOFF	.45	7	2	.10	.0	3.10	24.00	1.10	---	6.18	307.43	677.1
XSECTION	6	ADDHYD	3.77	7	2	.10	.0	3.10	24.00	.97	5328.31	6.97	1001.53	265.4
STRUCTURE	35	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.97	5353.37	6.98	1001.07	265.3
STRUCTURE	34	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.97	5344.00	6.98	1000.44	265.2
STRUCTURE	33	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.97	5324.00	6.98	1000.05	265.1
STRUCTURE	32	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.97	5314.74	6.98	999.58	264.9
STRUCTURE	31	RESVOR	3.77	7	2	.10	.0	3.10	24.00	.97	5303.99	6.98	997.22	264.3
XSECTION	4	RUNOFF	.54	7	2	.10	.0	3.10	24.00	.85	---	6.25	229.71	427.8
XSECTION	4	REACH	.54	7	2	.10	.0	3.10	24.00	.85	5323.90	6.49	174.61	325.2
STRUCTURE	45	RESVOR	.54	7	2	.10	.0	3.10	24.00	.85	5342.33	6.50	174.98	325.9
STRUCTURE	44	RESVOR	.54	7	2	.10	.0	3.10	24.00	.85	5342.53	6.50	174.89	325.7
STRUCTURE	43	RESVOR	.54	7	2	.10	.0	3.10	24.00	.85	5323.73	6.51	174.47	324.9

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TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 SUMMARY
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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	3											
XSECTION	2	RUNOFF	.22	7	2	.10	.0	3.10	24.00	.81	---	6.13	120.83	549.2
XSECTION	2	REACH	.22	7	2	.10	.0	3.10	24.00	.81	5346.95	6.29	103.88	472.2
STRUCTURE	46	RESVOR	.22	7	2	.10	.0	3.10	24.00	.81	5343.30	6.29	104.01	472.8
XSECTION	22	RUNOFF	.56	7	2	.10	.0	3.10	24.00	1.27	---	6.24	381.63	680.3
XSECTION	22	REACH	.56	7	2	.10	.0	3.10	24.00	1.27	5464.25	6.36	374.36	667.3
STRUCTURE	28	RESVOR	.56	7	2	.10	.0	3.10	24.00	1.26	5254.82	6.39	376.23	670.6
XSECTION	10	REACH	.56	7	2	.10	.0	3.10	24.00	1.27	5326.32	6.58	320.32	571.0

+ 22	2500	559	6.2	552	6.3	---	---	0	1.81	.10	1	1.38	.025	.987	210	.92?	.10	.06
+ +																		
+ 10	5000	550	6.4	482	6.6			0	1.81	.10	1	1.12 1.38	.101	.877	592	.47	.20	.17
+ +						683	6.2											
	ALTERNATE	1	STORM	2														
+ 44	4400	998	6.1	954	6.2			0	1.50	.10	1	2.16 1.37	.060	.956	278	.79?	.10	.08
+ +						1032	6.2											
+ 42	5700	1032	6.2	992	6.3			0	1.43	.10	1	.121 2.00	.026	.962	255	.83?	.10	.07
+ +						1135	6.3											
+ 40	6600	1265	6.3	1095	6.4			0	1.20	.10	1	1.83 1.36	.093	.865	462	.56	.10	.13
+ +						1288	6.4											
+ 18	5500	1288	6.4	1138	6.6			0	1.14	.10	1	.384 1.53	.081	.884	562	.49	.20	.16
+ +						1288	6.6											
+ 21	5500	236	6.2	183	6.5			0	1.14	.10	1	.898 1.39	.166	.776	914	.33	.30	.26
+ +						---	---											
+ 20	4500	175	6.6	161	6.8			0	1.14	.10	1	1.20 1.40	.068	.922	649	.43	.20	.18
+ +						482	6.1											
+ 6	5500	1360	6.7	1317	6.9			0	1.21	.10	1	.773 1.46	.034	.968	466	.56	.20	.13
+ +						1370	6.9											
+ 4	7200	305	6.2	242	6.5			0	1.10	.10	1	.740 1.53	.133	.792	785	.37	.30	.23
+ +						---	---											
+ 2	3750	161	6.1	140	6.3			0	1.05	.10	1	2.76 1.29	.096	.870	420	.60	.20	.12
+ +						---	---											
+ 22	2500	478	6.2	470	6.3			0	1.57	.10	1	1.75 1.38	.025	.983	218	.90?	.10	.06
+ +						---	---											
+ 10	5000	473	6.4	411	6.6			0	1.57	.10	1	1.10 1.38	.105	.868	614	.45	.20	.17
+ +						585	6.2											
	ALTERNATE	1	STORM	3														
+ 44	4400	792	6.1	746	6.2			0	1.20	.10	1	2.11 1.38	.063	.941	294	.76?	.10	.08
+ +						802	6.2											
+ 42	5700	802	6.2	737	6.3			0	1.14	.10	1	.102 2.00	.038	.918	314	.73?	.10	.09
+ +						844	6.3											
+ 40	6600	935	6.3	812	6.5			0	.94	.10	1	1.77 1.37	.094	.869	497	.53	.20	.14
+ +						916	6.5											
+ 18	5500	916	6.5	798	6.7			0	.89	.10	1	.355 1.55	.082	.871	623	.45	.10	.18
+ +						887	6.7											
												.876						

+	21	5500	177	6.3	133	6.6			0	.89	.10	1	1.40	.175	.751	981	.31	.20	.28
+							---	---											
+	20	4500	131	6.7	117	6.9			0	.89	.10	1	1.18 1.41	.071	.890	697	.41	.20	.20
+							391	6.1											
+	6	5500	1003	6.8	962	7.0			0	.95	.10	1	.714 1.48	.035	.960	505	.53	.20	.14
+							999	7.0											
+																			

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

JOB 1 SUMMARY
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SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS							PEAK		
OUTFLOW+										VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIME	
XSEC REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	@PEAK	KIN	STOR-	KIN		
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	BASE	INCR	#	COEFF	POWER	FACTOR	O/I	(K)	COEFF	AGE	MAT
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)		(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)	(HF)
ALTERNATE		1	STORM	3															
+	4	7200	224	6.2	175	6.5		0	.85	.10	1	.704	1.55	.141	.778	859	.35	.30	.2
+							---	---											
+	2	3750	119	6.1	104	6.3		0	.81	.10	1	2.63	1.32	.090	.874	426	.59	.20	.12
+							---	---											
+	22	2500	375	6.2	370	6.4		0	1.27	.10	1	1.71	1.39	.026	.987	231	.88?	.20	.06
+							---	---											
+	10	5000	376	6.4	320	6.6		0	1.26	.10	1	1.07	1.39	.111	.852	649	.43	.20	.18
+						460	6.2												
1																			

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

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	3
------------------------------	-----------------------------	--------------------	---	---	---

0	STRUCTURE 97	.91			
	ALTERNATE 1		281.09	250.63	199.35
0	STRUCTURE 46	.22			
	ALTERNATE 1		171.23	141.00	104.01
0	STRUCTURE 45	.54			
	ALTERNATE 1		298.95	242.36	174.98
0	STRUCTURE 44	.54			
+	ALTERNATE 1		299.09	242.42	174.89
0	STRUCTURE 43	.54			
+	ALTERNATE 1		299.14	243.42	174.47
0	STRUCTURE 42	2.61			
+	ALTERNATE 1		1344.96	1159.75	858.60
0	STRUCTURE 39	.41			
+	ALTERNATE 1		207.10	174.93	131.60
0	STRUCTURE 35	3.77			
+	ALTERNATE 1		1604.94	1372.27	1001.07
0	STRUCTURE 34	3.77			
+	ALTERNATE 1		1605.86	1371.96	1000.44
0	STRUCTURE 33	3.77			
+	ALTERNATE 1		1605.70	1373.08	1000.05
0	STRUCTURE 32	3.77			
+	ALTERNATE 1		1604.77	1373.95	999.58
0	STRUCTURE 31	3.77			
+	ALTERNATE 1		1601.98	1373.35	997.22
0	STRUCTURE 28	.56			
+	ALTERNATE 1		555.92	476.41	376.23
0	STRUCTURE 24	.91			
+	ALTERNATE 1		280.39	250.48	199.17
1					

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

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	3
0 XSECTION 2	.22				
+					

ALTERNATE	1		170.90	140.93	103.88
0 XSECTION	4	.54			
+					
ALTERNATE	1		298.95	242.79	174.61
0 XSECTION	6	3.77			
+					
ALTERNATE	1		1603.87	1373.55	1001.53
0 XSECTION	8	.25			
+					
ALTERNATE	1		674.23	611.77	528.42
0 XSECTION	10	.91			
+					
ALTERNATE	1		688.97	588.99	462.95
0 XSECTION	18	3.32			
+					
ALTERNATE	1		1581.92	1361.67	1003.07
0 XSECTION	20	.71			
+					
ALTERNATE	1		550.57	483.07	392.34
0 XSECTION	21	.41			
+					
ALTERNATE	1		224.31	183.24	133.26
0 XSECTION	22	.56			
+					
ALTERNATE	1		560.17	479.09	374.36
0 XSECTION	40	2.16			
+					
ALTERNATE	1		1587.30	1294.21	930.87
0 XSECTION	42	1.64			
+					
ALTERNATE	1		1527.68	1265.89	936.39
0 XSECTION	44	.98			
+					
ALTERNATE	1		1210.82	1031.59	803.45
0 XSECTION	46	.38			
+					
ALTERNATE	1		196.23	155.06	105.64
0 XSECTION	54	.61			
+					
ALTERNATE	1		797.88	684.06	538.59
1					

TR20 XEQ 03-26-99 09:06
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 - DET. & STR UPGRD : P3S1_OUT.TXT

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	3
0 XSECTION 56	.24			
+				
ALTERNATE 1		366.84	318.40	255.85

1END OF 1 JOBS IN THIS RUN

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

```

JOB TR-20                                SUMMARY  NOPLOTS
TITLE  SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
-----TITLE  DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT
5 RAINFL 7                                0.5
8      0.0000    0.0040    0.0080    0.0100    0.0140
8      0.0190    0.0220    0.0260    0.0300    0.0450
8      0.0600    0.1000    0.7100    0.7500    0.7750
8      0.8000    0.8200    0.8300    0.8400    0.8500
8      0.8600    0.8700    0.8750    0.8850    0.8900
8      0.9000    0.9050    0.9100    0.9200    0.9250
8      0.9300    0.9350    0.9400    0.9450    0.9500
8      0.9550    0.9600    0.9650    0.9700    0.9730
8      0.9750    0.9800    0.9830    0.9870    0.9900
8      0.9930    0.9960    0.9999    1.0000    1.0000
9 ENDTBL
2 XSECTN 002                                1.0
8      5340.0      0.0      0.0
8      5340.7      10.0     2.84
8      5342.9      50.0     8.90
8      5346.8     100.0    15.35
8      5362.5     500.0    62.87
8      5392.8    1000.0   121.15
9 ENDTBL
2 XSECTN 004                                1.0
8      5320.0      0.0      0.0
8      5320.4      10.0     5.70
8      5321.4      50.0    15.46
8      5323.0     100.0    24.04
8      5327.8     500.0    71.09
8      5335.6    1000.0   118.03
9 ENDTBL
2 XSECTN 006                                1.0
8      5320.0      0.0      0.0
8      5320.3      10.0     6.72
8      5320.9      50.0    18.34
8      5322.0     100.0    28.60
8      5324.5     500.0    83.67
8      5328.3    1000.0   135.58
9 ENDTBL
2 XSECTN 008                                1.0
8      5320.0      0.0      0.0
8      5320.5      10.0     4.92
8      5321.6      50.0    14.17
8      5323.3     100.0    22.81
8      5327.3     500.0    72.00
8      5332.9    1000.0   119.77

```

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

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9 ENDTBL
2 XSECTN 010                                1.0

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8	5320.0	0.0	0.0
8	5320.6	10.0	5.24
8	5321.9	50.0	15.74
8	5323.9	100.0	25.78
8	5328.3	500.0	83.60
8	5334.4	1000.0	139.88
9	ENDTBL		
2	XSECTN 012	1.0	
8	5300.0	0.0	0.0
8	5300.6	10.0	4.01
8	5302.1	50.0	12.53
8	5304.1	100.0	20.77
8	5308.4	500.0	68.46
8	5314.3	1000.0	114.90
9	ENDTBL		
2	XSECTN 014	1.0	
8	5280.0	0.0	0.0
8	5280.6	10.0	4.84
8	5281.9	50.0	14.85
8	5283.8	100.0	24.48
8	5288.0	500.0	80.08
8	5293.6	1000.0	134.18
9	ENDTBL		
2	XSECTN 016	1.0	
8	5250.0	0.0	0.0
8	5250.1	10.0	10.67
8	5250.4	50.0	28.19
8	5250.8	100.0	42.92
8	5251.9	500.0	115.15
8	5253.6	1000.0	177.46
9	ENDTBL		
2	XSECTN 018	1.0	
8	5480.0	0.0	0.0
8	5480.2	10.0	9.34
8	5480.7	50.0	25.00
8	5481.4	100.0	38.45
8	5483.3	500.0	107.48
8	5486.1	1000.0	170.17
9	ENDTBL		
2	XSECTN 020	1.0	
8	5460.0	0.0	0.0
8	5460.5	10.0	4.64
8	5461.8	50.0	14.20
8	5463.7	100.0	23.39

1

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

8	5467.7	500.0	76.44
8	5473.2	1000.0	128.05
9	ENDTBL		
2	XSECTN 022	1.0	
8	5460.0	0.0	0.0
8	5460.4	10.0	3.73
8	5461.2	50.0	11.22
8	5462.4	100.0	18.38
8	5465.1	500.0	59.55
8	5468.7	1000.0	99.55

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9 ENDTBL
2 XSECTN 024      1.0
8      5420.0      0.0      0.0
8      5420.4      10.0     5.15
8      5421.5      50.0    15.61
8      5422.9     100.0    25.64
8      5426.1     500.0    83.32
8      5430.5    1000.0   139.40
9 ENDTBL
2 XSECTN 026      1.0
8      5490.0      0.0      0.0
8      5490.4      10.0     4.35
8      5491.3      50.0    13.04
8      5492.6     100.0    21.34
8      5495.4     500.0    69.01
8      5499.3    1000.0   115.33
9 ENDTBL
2 XSECTN 028      1.0
8      5250.0      0.0      0.0
8      5250.2      10.0    12.06
8      5250.7      50.0    33.86
8      5251.5     100.0    53.75
8      5253.3     500.0   164.52
8      5255.8    1000.0   270.93
9 ENDTBL
2 XSECTN 030      1.0
8      5310.0      0.0      0.0
8      5310.4      10.0     5.39
8      5311.2      50.0    17.30
8      5312.3     100.0    28.86
8      5314.5     500.0    95.65
8      5317.5    1000.0   160.61
9 ENDTBL
2 XSECTN 032      1.0
8      5360.0      0.0      0.0
8      5360.3      10.0     6.18
1

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

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8      5361.2      50.0    17.66
8      5362.4     100.0    28.29
8      5365.4     500.0    88.38
8      5369.5    1000.0   146.45
9 ENDTBL
2 XSECTN 034      1.0
8      5390.0      0.0      0.0
8      5390.3      10.0     5.13
8      5391.1      50.0    14.64
8      5392.3     100.0    23.43
8      5395.1     500.0    73.03
8      5399.0    1000.0   120.95
9 ENDTBL
2 XSECTN 036      1.0
8      5420.0      0.0      0.0
8      5420.3      10.0     5.38
8      5421.2      50.0    15.38
8      5422.4     100.0    24.66

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8		5425.3	500.0	77.04
8		5429.4	1000.0	127.69
9	ENDTBL			
2	XSECTN 038	1.0		
8		5460.0	0.0	0.0
8		5460.4	10.0	6.03
8		5461.5	50.0	17.81
8		5463.1	100.0	28.97
8		5466.7	500.0	92.93
8		5471.6	1000.0	155.04
9	ENDTBL			
2	XSECTN 040	1.0		
8		5580.0	0.0	0.0
8		5580.4	10.0	3.88
8		5581.5	50.0	11.54
8		5583.0	100.0	18.84
8		5586.3	500.0	60.74
8		5591.0	1000.0	101.47
9	ENDTBL			
2	XSECTN 042	1.0		
8		5660.0	0.0	0.0
8		5660.4	10.0	4.38
8		5661.4	50.0	14.55
8		5662.8	100.0	24.45
8		5665.9	500.0	81.67
8		5670.3	1000.0	91.87
9	ENDTBL			
2	XSECTN 044	1.0		

1

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

8		5720.0	0.0	0.0
8		5720.4	10.0	3.38
8		5721.3	50.0	9.97
8		5722.6	100.0	16.21
8		5725.7	500.0	51.99
8		5729.9	1000.0	86.76
9	ENDTBL			
2	XSECTN 046	1.0		
8		5720.0	0.0	0.0
8		5720.4	10.0	3.18
8		5721.2	50.0	9.36
8		5722.5	100.0	15.21
8		5725.4	500.0	48.65
8		5729.5	1000.0	81.14
9	ENDTBL			
2	XSECTN 048	1.0		
8		5560.0	0.0	0.0
8		5560.4	10.0	7.22
8		5561.1	50.0	23.33
8		5562.0	100.0	40.62
8		5563.6	500.0	135.83
8		5565.8	1000.0	228.43
9	ENDTBL			
2	XSECTN 050	1.0		
8		5490.0	0.0	0.0
8		5490.6	10.0	6.04

8	5491.9	50.0	18.37
8	5493.8	100.0	30.19
8	5498.0	500.0	98.33
8	5503.7	1000.0	164.59
9 ENDTBL			
2 XSECTN	052	1.0	
8	5490.0	0.0	0.0
8	5490.2	10.0	4.35
8	5490.8	50.0	11.99
8	5491.6	100.0	18.81
8	5493.6	500.0	56.00
8	5496.5	1000.0	91.35
9 ENDTBL			
2 XSECTN	054	1.0	
8	6010.0	0.0	0.0
8	6010.5	10.0	2.18
8	6011.5	50.0	6.70
8	6013.1	100.0	11.06
8	6016.5	500.0	36.27
8	6021.1	1000.0	60.83
1			

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

9 ENDTBL			
2 XSECTN	056	1.0	
8	6000.0	0.0	0.0
8	6000.5	10.0	2.22
8	6001.6	50.0	6.83
8	6003.1	100.0	11.27
8	6006.5	500.0	36.98
8	6011.2	1000.0	62.03
9 ENDTBL			
2 XSECTN	058	1.0	
8	5680.0	0.0	0.0
8	5680.5	10.0	2.24
8	5681.6	50.0	6.90
8	5683.2	100.0	11.39
8	5686.6	500.0	37.38
8	5691.3	1000.0	62.71
9 ENDTBL			
2 XSECTN	060	1.0	
8	5680.0	0.0	0.0
8	5680.5	10.0	2.53
8	5681.7	50.0	7.85
8	5683.5	100.0	12.99
8	5687.2	500.0	42.75
8	5692.3	1000.0	71.75
9 ENDTBL			
2 XSECTN	062	1.0	
8	5700.0	0.0	0.0
8	5700.4	10.0	2.93
8	5701.4	50.0	8.94
8	5702.7	100.0	14.71
8	5705.7	500.0	48.02
8	5709.7	1000.0	80.42
9 ENDTBL			
3 STRUCT	01		

8		5280.0	0.0	0.0
8		5281.0	67.0	0.07
8		5282.0	211.0	0.30
8		5283.0	360.0	0.76
8		5284.0	504.0	1.49
8		5284.5	576.0	1.99
8		5285.0	624.0	2.57

9 ENDTBL

3 STRUCT 02

8		5310.0	0.0	0.0
8		5312.0	126.0	0.27
8		5314.0	322.0	1.92

1

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

8		5316.0	518.0	6.24
8		5317.0	588.0	9.80
8		5318.0	658.0	14.51
8		5319.0	728.0	20.53
8		5320.0	770.0	28.01

9 ENDTBL

3 STRUCT 03

8		5330.0	0.0	0.0
8		5332.0	36.0	0.09
8		5334.0	78.0	0.38
8		5336.0	886.0	0.94
8		5337.0	1818.0	1.36
8		5338.0	3093.0	1.87

9 ENDTBL

3 STRUCT 04

8		5320.0	0.0	0.0
8		5322.0	35.0	0.04
8		5324.0	85.0	0.22
8		5326.0	120.0	0.59
8		5327.0	130.0	0.88
8		5328.0	145.0	1.25
8		5329.0	160.0	1.71
8		5330.0	170.0	2.26

9 ENDTBL

3 STRUCT 07

8		5360.0	0.0	0.0
8		5362.0	180.0	0.07
8		5364.0	480.0	0.35
8		5366.0	900.0	0.94
8		5367.0	1100.0	1.39
8		5368.0	1300.0	1.94
8		5369.0	1600.0	2.63
8		5370.0	1700.0	3.46

9 ENDTBL

3 STRUCT 13

8		5580.0	0.0	0.0
8		5582.0	150.0	0.16
8		5584.0	260.0	0.65
8		5586.0	400.0	1.57
8		5587.0	500.0	2.21
8		5588.0	625.0	2.98
8		5589.0	750.0	3.90

8	5590.0	900.0	4.98
8	5591.0	1100.0	6.22
8	5592.0	1200.0	7.63
8	5593.0	1300.0	9.23

1

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

8	5594.0	1500.0	11.03
8	5595.0	1600.0	13.03
8	5596.0	1800.0	14.23
8	5597.0	2000.0	15.48
8	5598.0	2100.0	16.77

9 ENDTBL
3 STRUCT 18

8	5320.0	0.0	0.0
8	5322.0	18.0	0.19
8	5324.0	45.0	0.76
8	5326.0	60.0	1.75
8	5327.0	70.0	2.42
8	5328.0	75.0	3.22
8	5329.0	80.0	4.15
8	5330.0	85.0	5.22

9 ENDTBL
3 STRUCT 21

8	5350.0	0.0	0.0
8	5352.0	30.0	0.03
8	5354.0	68.0	0.15
8	5356.0	90.0	0.42
8	5357.0	390.0	0.63
8	5358.0	1026.0	0.91

9 ENDTBL
3 STRUCT 24

8	5320.0	0.0	0.0
8	5322.0	26.0	0.04
8	5324.0	80.0	0.19
8	5326.0	140.0	0.49
8	5327.0	160.0	0.71
8	5328.0	180.0	0.99
8	5329.0	190.0	1.32
8	5330.0	210.0	1.73

9 ENDTBL
3 STRUCT 28

8	5250.0	0.0	0.0
8	5252.0	30.0	0.04
8	5254.0	88.0	0.19
8	5256.0	160.0	0.49
8	5257.0	200.0	0.71
8	5258.0	314.0	0.99
8	5259.0	747.0	1.32
8	5260.0	1446.0	1.73

9 ENDTBL
3 STRUCT 31

8	5300.0	0.0	0.0
---	--------	-----	-----

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

8	5302.0	500.0	0.04
8	5304.0	1000.0	0.16
8	5406.0	1850.0	0.35
8	5407.0	2250.0	0.47
8	5408.0	2750.0	0.61
8	5409.0	3400.0	0.78
8	5410.0	4000.0	0.95

9 ENDTBL

3 STRUCT 32

8	5310.0	0.0	0.0
8	5312.0	380.0	0.04
8	5314.0	760.0	0.16
8	5316.0	1406.0	0.35
8	5317.0	1824.0	0.47
8	5318.0	2128.0	0.61
8	5319.0	2660.0	0.78
8	5320.0	3040.0	0.95

9 ENDTBL

3 STRUCT 33

8	5320.0	0.0	0.0
8	5322.0	400.0	0.05
8	5324.0	1000.0	0.21
8	5326.0	1850.0	0.52
8	5327.0	2500.0	0.74
8	5328.0	3000.0	1.01
8	5429.0	3500.0	1.34
8	5430.0	4000.0	1.73

9 ENDTBL

3 STRUCT 35

8	5350.0	0.0	0.0
8	5352.0	468.0	0.05
8	5354.0	1248.0	0.21
8	5356.0	2340.0	0.52
8	5357.0	2860.0	0.74
8	5358.0	3380.0	1.01
8	5359.0	3900.0	1.34

9 ENDTBL

3 STRUCT 34

8	5340.0	0.0	0.0
8	5342.0	225.0	0.05
8	5344.0	500.0	0.21
8	5346.0	925.0	0.52
8	5347.0	1200.0	0.74
8	5348.0	1450.0	1.01
8	5349.0	1750.0	1.34

9 ENDTBL

1

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

3 STRUCT 38

8	5570.0	0.0	0.0
8	5572.0	110.0	0.04
8	5574.0	200.0	0.20
8	5576.0	370.0	0.53
8	5577.0	480.0	0.77

8	5578.0	600.0	1.07
8	5579.0	700.0	1.43
8	5580.0	800.0	1.87
9	ENDTBL		
3	STRUCT	39	
8	5600.0	0.0	0.0
8	5602.0	26.0	0.03
8	5604.0	80.0	0.14
8	5606.0	146.0	0.39
8	5607.0	170.0	0.58
8	5608.0	190.0	0.83
8	5609.0	210.0	1.13
8	5610.0	220.0	1.50
9	ENDTBL		
3	STRUCT	41	
8	5500.0	0.0	0.0
8	5502.0	44.0	0.02
8	5504.0	130.0	0.10
8	5506.0	200.0	0.27
8	5507.0	434.0	0.41
8	5508.0	905.0	0.57
8	5509.0	1589.0	0.78
8	5510.0	2508.0	1.03
9	ENDTBL		
3	STRUCT	42	
8	5250.0	0.0	0.0
8	5252.0	90.0	0.16
8	5254.0	300.0	0.65
8	5256.0	540.0	1.57
8	5257.0	660.0	2.21
8	5258.0	780.0	2.98
8	5259.0	870.0	3.90
8	5260.0	900.0	4.98
8	5261.0	1020.0	6.22
8	5262.0	1065.0	7.63
8	5263.0	1125.0	9.23
8	5264.0	1656.0	11.03
8	5265.0	2702.0	13.03
9	ENDTBL		
3	STRUCT	43	

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

8	5320.0	0.0	0.0
8	5322.0	75.0	0.02
8	5324.0	190.0	0.08
8	5326.0	380.0	0.19
8	5327.0	475.0	0.26
8	5328.0	600.0	0.33
8	5329.0	650.0	0.41
8	5330.0	750.0	0.51
9	ENDTBL		
3	STRUCT	44	
8	5340.0	0.0	0.0
8	5342.0	112.0	0.02
8	5344.0	350.0	0.08
8	5346.0	602.0	0.19

8		5347.0	742.0	0.26
8		5348.0	840.0	0.33
8		5349.0	1070.0	0.41
8		5350.0	1432.0	0.51
9	ENDTBL			
3	STRUCT	45		
8		5340.0	0.0	0.0
8		5342.0	135.0	0.02
8		5344.0	375.0	0.08
8		5346.0	676.0	0.19
8		5347.0	826.0	0.26
8		5348.0	975.0	0.33
8		5349.0	1215.0	0.41
8		5350.0	1657.0	0.51
9	ENDTBL			
3	STRUCT	46		
8		5340.0	0.0	0.0
8		5344.0	44.0	0.02
8		5346.0	76.0	0.04
8		5347.0	92.0	0.05
8		5348.0	136.0	0.06
8		5349.0	264.0	0.08
8		5350.0	643.0	0.10
9	ENDTBL			
3	STRUCT	93		
8		5460.0	0.0	0.0
8		5466.0	1.0	81.78
8		5472.0	2.0	163.55
8		5478.0	3.0	245.33
8		5484.0	4.0	327.11
8		5487.0	5.0	368.00
8		5490.0	6.0	465.50

1

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

8		5493.0	7.0	563.00		
9	ENDTBL					
3	STRUCT	94				
8		5498.0	0.0	0.0		
8		5504.0	1.0	51.78		
8		5510.0	2.0	103.56		
8		5516.0	3.0	155.33		
8		5522.0	4.0	207.11		
8		5525.0	5.0	233.00		
9	ENDTBL					
6	RUNOFF 1 058	7	0.7410	71.2	0.457	1
6	RUNOFF 1 060	6	0.6680	73.3	0.518	1
6	ADDHYD 4 060	7 6 5				1
6	RUNOFF 1 062	7	0.2680	69.5	0.532	1
6	ADDHYD 4 062	5 7 6				1
6	REACH 3 050	6 4	8600.0			1
6	RUNOFF 1 050	3	0.2570	86.5	0.725	1
6	ADDHYD 4 050	4 3 1				1
6	RUNOFF 1 052	6	1.3440	90.1	0.340	1
6	ADDHYD 4 052	1 6 2				1
6	REACH 3 038	2 7	2700.0			1
6	RUNOFF 1 038	6	0.2440	76.1	0.542	1

6	ADDHYD	4	038	7	6	5				1
6	RESVOR	2	93	5	4		5460.0			1 1
6	REACH	3	036	4	5		3000.0			1
6	RUNOFF	1	036		2		0.1840	75.3	0.457	1
6	ADDHYD	4	036	5	2	1				1
6	REACH	3	032	1	6		4200.0			1
6	RUNOFF	1	032		5		0.4330	76.9	0.525	1
6	ADDHYD	4	032	6	5	4				1
6	RESVOR	2	07	4	3		5360.0			1 1
6	REACH	3	030	3	7		3400.0			1
6	RUNOFF	1	030		6		0.2740	72.2	0.530	1
6	ADDHYD	4	030	7	6	5				1
6	RUNOFF	1	034		3		0.1800	69.0	0.377	1
6	ADDHYD	4	034	5	3	2				1
6	RESVOR	2	02	2	7		5310.0			1 1
6	REACH	3	028	7	6		4200.0			1
6	RUNOFF	1	028		5		0.1920	68.7	1.013	1
6	ADDHYD	4	028	6	5	4				1
6	RESVOR	2	01	4	1		5280.0			1 1
6	RUNOFF	1	016		7		0.3000	70.9	0.553	1
6	REACH	3	016	7	6		3500.0			1
6	RESVOR	2	18	6	2		5320.0			1 1
6	RUNOFF	1	014		3		0.7610	77.8	0.526	1
6	RUNOFF	1	048		7		0.3090	73.3	0.762	1

1

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

6	REACH	3	026	7	6		4300.0			1
6	RUNOFF	1	026		5		0.4090	74.6	0.397	1
6	ADDHYD	4	026	6	5	4				1
6	RESVOR	2	94	4	7		5498.0			1 1
6	REACH	3	024	7	6		4200.0			1
6	RUNOFF	1	024		5		0.4850	76.1	0.509	1
6	ADDHYD	4	024	6	5	4				1
6	REACH	3	012	4	6		5500.0			1
6	RUNOFF	1	012		5		0.6570	80.2	0.419	1
6	ADDHYD	4	012	6	5	4				1
ENDATA										
7	INCREM	6					0.1			
7	COMPUT	7	058	012			0.0	3.80	1.0	7 2 01 01
ENDCMP 1										
7	INCREM	6					0.1			
7	COMPUT	7	058	012			0.0	3.50	1.0	7 2 01 02
ENDCMP 1										
7	INCREM	6					0.1			
7	COMPUT	7	058	012			0.0	3.10	1.0	7 2 01 03
ENDATA										
7	INCREM	6					0.1			
7	COMPUT	7	058	012			0.0	2.70	1.0	7 2 01 04
ENDCMP 1										
7	INCREM	6					0.1			
7	COMPUT	7	058	012			0.0	2.30	1.0	7 2 01 05
ENDCMP 1										
7	INCREM	6					0.1			
7	COMPUT	7	058	012			0.0	1.80	1.0	7 2 01 06
ENDCMP 1										
ENDJOB 2										

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

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

+ MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

+ FROM XSECTION 58

+ TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 3.80 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2

ALTERNATE NO.= 1 STORM NO.= 1 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	588.29	(RUNOFF)
10.44	22.28	(RUNOFF)
11.57	20.83	(RUNOFF)
12.57	21.11	(RUNOFF)
14.08	21.23	(RUNOFF)
18.92	11.92	(RUNOFF)
20.60	10.96	(RUNOFF)
21.57	9.29	(RUNOFF)
23.50	9.00	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	558.28	(RUNOFF)
10.46	21.43	(RUNOFF)
11.60	19.57	(RUNOFF)
12.60	19.73	(RUNOFF)
14.11	19.79	(RUNOFF)
18.94	11.35	(RUNOFF)
20.63	10.15	(RUNOFF)
21.60	8.76	(RUNOFF)
23.53	8.42	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 1
PAGE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	1143.57	5693.76
10.45	43.76	5681.51
11.59	40.36	5681.41
12.59	40.82	5681.42
14.09	40.99	5681.43
18.93	23.28	5680.90
20.61	21.08	5680.83

21.58	18.05	5680.74
23.51	17.41	5680.72

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	172.87	(RUNOFF)
10.46	7.65	(RUNOFF)
11.61	6.96	(RUNOFF)
12.61	7.04	(RUNOFF)
14.12	7.08	(RUNOFF)
18.94	4.11	(RUNOFF)
23.53	3.05	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	1314.61	5712.22
10.45	51.41	5701.44
11.59	47.32	5701.33
12.59	47.84	5701.35
14.10	48.06	5701.35
18.93	27.39	5700.83
20.62	24.74	5700.77
21.58	21.22	5700.68
23.52	20.45	5700.66

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 50 BY 312.1 CFS

OPERATION REACH CROSS SECTION 50

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 1
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPRGD : P3S2_OUT.TYT	PAGE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.52	933.43	5502.94
10.67	51.21	5491.95
11.90	43.50	5491.69
12.90	43.75	5491.70
14.42	43.08	5491.68
19.16	27.37	5491.16
20.97	22.13	5490.99
21.88	20.55	5490.94
23.79	19.28	5490.90

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	328.86	(RUNOFF)
10.37	11.08	(RUNOFF)
11.70	9.51	(RUNOFF)
12.70	9.42	(RUNOFF)

14.22	9.32	(RUNOFF)
18.86	5.66	(RUNOFF)
23.59	3.96	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	1181.56	5505.77
10.49	62.16	5492.36
11.86	52.34	5491.99
12.87	52.54	5492.00
14.40	51.69	5491.96
18.97	32.99	5491.35
20.94	26.55	5491.14
21.85	24.65	5491.08
23.75	22.82	5491.02

OPERATION RUNOFF CROSS SECTION 52

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
PAGE :

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	2963.29	(RUNOFF)
10.37	61.27	(RUNOFF)
11.52	58.94	(RUNOFF)
12.52	59.07	(RUNOFF)
14.02	59.24	(RUNOFF)
18.87	31.01	(RUNOFF)
20.53	29.65	(RUNOFF)
21.51	24.36	(RUNOFF)
23.47	23.85	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	3329.70	5510.01
10.40	123.39	5491.72
11.57	105.38	5491.63
12.57	105.08	5491.63
14.09	102.17	5491.61
18.92	64.00	5491.02
20.62	50.99	5490.82
21.55	48.07	5490.77
23.50	45.18	5490.73

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 2321.9 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	3283.61	5493.98
10.50	123.38	5463.31
11.67	105.05	5463.15
12.68	104.72	5463.14
14.20	101.72	5463.12
19.02	63.99	5461.95
20.73	50.79	5461.53
21.66	48.02	5461.45
23.61	45.04	5461.36

OPERATION RUNOFF CROSS SECTION 38

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
 PAGE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	231.77	(RUNOFF)
10.42	8.42	(RUNOFF)
11.61	7.62	(RUNOFF)
12.61	7.69	(RUNOFF)
14.12	7.70	(RUNOFF)
18.95	4.43	(RUNOFF)
23.54	3.26	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	3515.23	5496.25
10.47	131.81	5463.39
11.67	112.60	5463.21
12.68	112.31	5463.21
14.19	109.25	5463.18
18.97	68.43	5462.09
20.72	54.63	5461.65
21.65	51.41	5461.54
23.60	48.26	5461.45

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 4.82 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.70	4.82	5486.46

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.52 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00	.00 .00 .01 .02	.06 .18		
6.00	DISCHG	.38 .67 1.01 1.34	1.63 1.86 2.05 2.22	2.36 2.48		
7.00	DISCHG	2.58 2.66 2.73 2.79	2.85 2.89 2.94 2.97	3.01 3.05		
8.00	DISCHG	3.08 3.11 3.14 3.16	3.19 3.21 3.23 3.25	3.27 3.28		
9.00	DISCHG	3.30 3.31 3.33 3.34	3.35 3.37 3.38 3.39	3.41 3.42		
10.00	DISCHG	3.43 3.45 3.46 3.47	3.48 3.50 3.51 3.52	3.54 3.55		

11.00	DISCHG	3.56	3.57	3.58	3.58	3.59	3.60	3.62	3.63	3.64	3.65
12.00	DISCHG	3.66	3.67	3.67	3.68	3.69	3.70	3.71	3.72	3.73	3.74
13.00	DISCHG	3.75	3.76	3.77	3.78	3.79	3.79	3.80	3.81	3.82	3.82
14.00	DISCHG	3.83	3.84	3.85	3.86	3.87	3.88	3.89	3.90	3.91	3.92
15.00	DISCHG	3.92	3.93	3.94	3.95	3.95	3.96	3.97	3.97	3.98	3.98
16.00	DISCHG	3.99	4.00	4.01	4.02	4.03	4.05	4.06	4.07	4.09	4.10
17.00	DISCHG	4.11	4.12	4.14	4.15	4.16	4.18	4.19	4.20	4.22	4.23
18.00	DISCHG	4.24	4.25	4.27	4.28	4.29	4.31	4.32	4.33	4.34	4.36
19.00	DISCHG	4.37	4.38	4.40	4.41	4.42	4.43	4.44	4.45	4.46	4.47
20.00	DISCHG	4.47	4.48	4.49	4.49	4.50	4.51	4.52	4.53	4.54	4.55

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TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
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21.00	DISCHG	4.56	4.57	4.58	4.59	4.60	4.60	4.61	4.62	4.63	4.64
22.00	DISCHG	4.65	4.66	4.67	4.68	4.68	4.69	4.70	4.71	4.71	4.72
23.00	DISCHG	4.73	4.74	4.74	4.75	4.76	4.77	4.78	4.79	4.79	4.80
24.00	DISCHG	4.81	4.81	4.81	4.82	4.82	4.82	4.82	4.82	4.82	4.82
25.00	DISCHG	4.82	4.82	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81
26.00	DISCHG	4.81	4.81	4.81	4.81	4.81	4.80	4.80	4.80	4.80	4.80
27.00	DISCHG	4.80	4.80	4.80	4.80	4.80	4.79	4.79	4.79	4.79	4.79
28.00	DISCHG	4.79	4.79	4.79	4.79	4.79	4.78	4.78	4.78	4.78	4.78
29.00	DISCHG	4.78	4.78	4.78	4.78	4.78	4.78	4.77	4.77	4.77	4.77

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

0 *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 4.77 CFS, 99.01 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 4.81 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.10	4.81	5420.14

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	184.05	(RUNOFF)
10.42	6.23	(RUNOFF)
11.57	5.80	(RUNOFF)
12.57	5.87	(RUNOFF)
14.08	5.89	(RUNOFF)
18.90	3.28	(RUNOFF)
23.50	2.47	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	184.24	5423.01
10.46	9.67	5420.29
11.58	9.37	5420.28
12.58	9.54	5420.29
14.08	9.69	5420.29

18.97	7.60	5420.23
23.51	7.20	5420.22

OPERATION REACH CROSS SECTION 32

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	148.42	5362.76
10.68	9.64	5360.29
11.86	9.01	5360.27
12.86	9.15	5360.27
14.37	9.27	5360.28
19.20	7.58	5360.23
23.77	7.10	5360.21

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	432.88	(RUNOFF)
10.46	15.30	(RUNOFF)
11.61	13.89	(RUNOFF)
12.60	14.01	(RUNOFF)
14.11	14.02	(RUNOFF)
18.88	8.01	(RUNOFF)
20.64	7.13	(RUNOFF)
21.60	6.16	(RUNOFF)
23.53	5.90	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	517.80	5365.55
10.46	24.90	5360.64
11.65	22.25	5360.58
12.65	22.48	5360.58
14.17	22.56	5360.58
18.96	15.56	5360.42
20.71	14.01	5360.39
21.65	13.08	5360.37
23.56	12.84	5360.36

OPERATION RESVOR STRUCTURE 7

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	515.10	5364.17
10.46	24.89	5360.28
11.66	22.25	5360.25
12.65	22.47	5360.25
14.17	22.56	5360.25
18.96	15.56	5360.17
20.71	14.01	5360.16
21.65	13.08	5360.15
23.56	12.84	5360.14

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.14 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	1.00	14.89	59.67	154.37
6.00	DISCHG	279.03	422.79	503.31	509.65	449.41	359.12	283.22	219.48	169.95	130.12
7.00	DISCHG	107.15	86.67	76.88	66.90	63.18	58.29	56.92	54.00	52.84	50.28
8.00	DISCHG	49.06	46.85	44.69	40.85	37.18	33.42	30.74	28.54	27.20	26.11
9.00	DISCHG	25.55	25.07	24.87	24.68	24.64	24.58	24.60	24.59	24.63	24.65
10.00	DISCHG	24.70	24.73	24.77	24.80	24.84	24.87	24.67	23.87	22.38	20.57
11.00	DISCHG	18.87	17.76	17.58	18.41	19.76	21.14	22.10	22.16	21.31	19.95
12.00	DISCHG	18.59	17.63	17.62	18.50	19.88	21.31	22.33	22.37	21.53	20.20
13.00	DISCHG	18.76	17.57	16.68	16.04	15.60	15.32	15.38	16.11	17.57	19.39
14.00	DISCHG	21.16	22.31	22.51	21.72	20.38	18.97	17.79	16.92	16.27	15.84
15.00	DISCHG	15.53	15.35	15.22	15.15	15.09	15.07	15.06	15.06	15.07	15.08
16.00	DISCHG	15.09	15.10	15.11	15.12	15.13	15.14	15.16	15.17	15.18	15.20
17.00	DISCHG	15.21	15.23	15.25	15.26	15.28	15.30	15.32	15.33	15.35	15.37
18.00	DISCHG	15.39	15.40	15.42	15.44	15.46	15.47	15.49	15.51	15.53	15.55
19.00	DISCHG	15.55	15.47	15.13	14.52	13.78	13.07	12.45	11.85	11.24	10.66
20.00	DISCHG	10.18	9.96	10.23	10.98	11.99	13.01	13.74	14.01	13.83	13.38
21.00	DISCHG	12.86	12.48	12.33	12.41	12.64	12.89	13.06	13.06	12.87	12.58
22.00	DISCHG	12.28	12.04	11.86	11.73	11.65	11.59	11.56	11.54	11.53	11.53
23.00	DISCHG	11.54	11.58	11.75	12.05	12.40	12.72	12.80	12.32	11.27	9.93
24.00	DISCHG	8.60	7.52	6.71	6.11	5.68	5.38	5.18	5.04	4.95	4.90
25.00	DISCHG	4.86	4.84	4.82	4.82	4.82	4.81	4.81	4.81	4.81	4.81
26.00	DISCHG	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.80	4.80
27.00	DISCHG	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.79	4.79
28.00	DISCHG	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.78	4.78
29.00	DISCHG	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.77

OPERATION REACH CROSS SECTION 30

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TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	472.02	5314.35
10.58	24.85	5310.70
11.82	21.75	5310.64
12.82	21.96	5310.64
14.34	21.96	5310.64
19.07	15.54	5310.51
20.89	13.72	5310.47
21.80	12.99	5310.46

23.70

12.65

5310.45

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	211.62	(RUNOFF)
10.43	8.49	(RUNOFF)
11.61	7.74	(RUNOFF)
12.61	7.81	(RUNOFF)
14.12	7.85	(RUNOFF)
18.93	4.53	(RUNOFF)
23.54	3.35	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	622.09	5315.23
10.48	33.30	5310.87
11.74	28.82	5310.78
12.74	29.09	5310.78
14.26	29.00	5310.78
18.98	20.06	5310.60
20.81	17.34	5310.55
21.72	16.36	5310.53
23.61	15.79	5310.52

OPERATION RUNOFF CROSS SECTION 34

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXTJOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	141.52	(RUNOFF)
7.47	11.79	(RUNOFF)
10.45	5.07	(RUNOFF)
11.54	4.85	(RUNOFF)
12.54	4.91	(RUNOFF)
14.04	4.97	(RUNOFF)
18.95	2.73	(RUNOFF)
23.48	2.11	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	700.14	5396.66
10.46	38.36	5390.87
11.68	33.07	5390.76
12.68	33.38	5390.77
14.20	33.24	5390.76
18.96	22.79	5390.56
20.75	19.50	5390.49

21.66	18.40	5390.47
23.57	17.80	5390.46

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	553.81	5316.51
10.47	38.34	5310.61
11.70	33.05	5310.52
12.71	33.34	5310.53
14.23	33.21	5310.53
18.97	22.78	5310.36
20.78	19.47	5310.31
21.68	18.39	5310.29
23.59	17.75	5310.28

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	4.59 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.16
6.00	DISCHG	201.14	334.53	415.59	499.12	537.06
7.00	DISCHG	380.22	320.39	214.37	162.21	133.41
8.00	DISCHG	80.41	77.41	73.69	68.64	63.01
9.00	DISCHG	41.21	40.01	39.21	38.68	38.36
10.00	DISCHG	38.08	38.13	38.18	38.24	38.29
11.00	DISCHG	30.78	28.72	27.73	28.06	29.27
12.00	DISCHG	29.45	27.95	27.34	27.91	29.32
13.00	DISCHG	29.75	28.01	26.43	25.13	24.12

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 1
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14.00	DISCHG	30.04	32.12	33.16	32.86	31.63	29.99	28.28	26.73	25.44	24.45
15.00	DISCHG	23.70	23.18	22.81	22.57	22.40	22.30	22.24	22.20	22.19	22.19
16.00	DISCHG	22.19	22.21	22.22	22.23	22.25	22.26	22.28	22.30	22.31	22.33
17.00	DISCHG	22.35	22.37	22.39	22.41	22.43	22.45	22.47	22.49	22.52	22.54
18.00	DISCHG	22.56	22.58	22.60	22.62	22.65	22.67	22.69	22.71	22.73	22.76
19.00	DISCHG	22.78	22.71	22.33	21.56	20.57	19.55	18.56	17.56	16.52	15.53
20.00	DISCHG	14.66	14.07	14.09	14.84	16.04	17.38	18.58	19.32	19.46	19.16
21.00	DISCHG	18.65	18.11	17.75	17.68	17.82	18.07	18.31	18.39	18.24	17.92
22.00	DISCHG	17.55	17.17	16.84	16.57	16.37	16.22	16.11	16.04	16.00	15.97
23.00	DISCHG	15.97	16.00	16.19	16.55	17.01	17.48	17.75	17.36	16.16	14.47
24.00	DISCHG	12.65	10.91	9.39	8.16	7.19	6.46	5.93	5.56	5.30	5.13
25.00	DISCHG	5.01	4.93	4.88	4.85	4.83	4.82	4.82	4.82	4.81	4.81
26.00	DISCHG	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.81	4.80
27.00	DISCHG	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.79
28.00	DISCHG	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.78
29.00	DISCHG	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.86	505.61	5253.33
10.60	38.28	5250.55
11.91	31.88	5250.47
12.92	31.94	5250.47

14.48	31.24	5250.47
19.12	22.73	5250.36
21.86	18.21	5250.30
23.77	17.22	5250.29

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	70.91	(RUNOFF)
12.85	4.34	(RUNOFF)
14.39	4.25	(RUNOFF)
18.97	2.87	(RUNOFF)
23.66	1.94	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	559.93	5253.60
10.56	43.59	5250.62
11.90	36.23	5250.53
12.91	36.27	5250.53
14.47	35.45	5250.52
19.08	25.60	5250.40
21.86	20.34	5250.33
23.76	19.13	5250.31

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	554.46	5284.35
10.56	43.58	5280.65
11.91	36.22	5280.54
12.93	36.26	5280.54
14.48	35.45	5280.53
19.09	25.60	5280.38
21.87	20.34	5280.30
23.77	19.13	5280.29

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 4.78 SQ.MI.
5.00	DISCHG .00 .00 .00 .00	.00 .00 .01	.30 2.74 14.85
6.00	DISCHG 53.01 110.02 195.49 274.81	364.01 427.22 487.62	524.76 546.55 554.42
7.00	DISCHG 544.36 516.52 471.10 412.53	345.08 274.70 229.69	186.90 159.67 141.29
8.00	DISCHG 126.61 115.81 107.18 100.02	93.32 86.68 80.12	73.83 68.03 62.42
9.00	DISCHG 58.22 54.49 51.67 49.39	47.72 46.43 45.51	44.83 44.35 44.02
10.00	DISCHG 43.80 43.67 43.59 43.56	43.55 43.57 43.58	43.51 43.16 42.26
11.00	DISCHG 40.79 38.90 36.88 35.13	34.05 33.78 34.20	35.03 35.85 36.22
12.00	DISCHG 35.96 35.16 34.06 33.07	32.60 32.80 33.58	34.69 35.71 36.24
13.00	DISCHG 36.08 35.33 34.16 32.77	31.34 30.01 28.85	27.98 27.61 27.96
14.00	DISCHG 29.04 30.67 32.53 34.18	35.21 35.44 34.97	34.01 32.77 31.45

15.00	DISCHG	30.20	29.08	28.14	27.37	26.75	26.28	25.92	25.65	25.46	25.32
16.00	DISCHG	25.22	25.16	25.12	25.10	25.09	25.08	25.09	25.10	25.11	25.12
17.00	DISCHG	25.13	25.15	25.17	25.19	25.21	25.23	25.25	25.27	25.30	25.32
18.00	DISCHG	25.34	25.37	25.39	25.41	25.44	25.46	25.48	25.51	25.53	25.56
19.00	DISCHG	25.58	25.60	25.57	25.42	25.04	24.41	23.59	22.67	21.67	20.61
20.00	DISCHG	19.53	18.48	17.57	16.95	16.80	17.15	17.87	18.81	19.72	20.40
21.00	DISCHG	20.75	20.79	20.61	20.34	20.13	20.05	20.08	20.19	20.31	20.33
22.00	DISCHG	20.23	20.02	19.73	19.41	19.09	18.80	18.55	18.34	18.18	18.05
23.00	DISCHG	17.95	17.89	17.86	17.91	18.07	18.35	18.70	19.02	19.10	18.73
24.00	DISCHG	17.84	16.55	15.03	13.43	11.89	10.48	9.27	8.26	7.44	6.78
25.00	DISCHG	6.28	5.89	5.59	5.38	5.21	5.10	5.01	4.95	4.91	4.88
26.00	DISCHG	4.86	4.85	4.84	4.83	4.82	4.81	4.81	4.81	4.81	4.81
27.00	DISCHG	4.81	4.81	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
28.00	DISCHG	4.80	4.80	4.79	4.79	4.79	4.79	4.79	4.79	4.79	4.79

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 1
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29.00	DISCHG	4.79	4.79	4.78	4.78	4.78	4.78	4.78	4.78	4.78	4.78
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OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	207.70	(RUNOFF)
10.43	8.93	(RUNOFF)
11.62	8.09	(RUNOFF)
12.62	8.17	(RUNOFF)
14.12	8.20	(RUNOFF)
18.90	4.79	(RUNOFF)
23.55	3.53	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	168.11	5250.99
10.56	8.92	5250.09
11.81	7.66	5250.08
12.81	7.71	5250.08
14.33	7.67	5250.08
19.05	4.78	5250.05
23.70	3.40	5250.03

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.89	80.84	5329.17
10.61	8.90	5320.99
11.92	7.47	5320.83
12.92	7.51	5320.83
14.45	7.44	5320.83
19.08	4.78	5320.53
23.78	3.32	5320.37

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .30 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.36	2.70
6.00	DISCHG	10.64	24.48	44.05	54.54	66.61	73.47	77.13	79.47	80.60	80.83
7.00	DISCHG	80.41	79.41	77.94	76.20	74.20	71.92	69.13	63.93	59.18	54.79
8.00	DISCHG	50.80	47.17	41.88	34.17	28.63	24.46	21.17	18.50	15.12	12.77
9.00	DISCHG	11.37	10.48	9.91	9.53	9.27	9.11	9.00	8.93	8.89	8.87
10.00	DISCHG	8.86	8.86	8.86	8.87	8.88	8.89	8.90	8.89	8.82	8.60
11.00	DISCHG	8.20	7.66	7.08	6.60	6.33	6.35	6.60	6.97	7.30	7.47
12.00	DISCHG	7.38	7.09	6.69	6.34	6.17	6.26	6.55	6.96	7.32	7.50
13.00	DISCHG	7.43	7.15	6.73	6.29	5.89	5.55	5.29	5.11	5.06	5.19
14.00	DISCHG	5.54	6.07	6.65	7.14	7.41	7.40	7.15	6.76	6.33	5.94

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 1
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT PAGE 13

15.00	DISCHG	5.61	5.35	5.15	5.01	4.91	4.84	4.79	4.75	4.73	4.72
16.00	DISCHG	4.71	4.71	4.70	4.70	4.71	4.71	4.71	4.71	4.72	4.72
17.00	DISCHG	4.72	4.72	4.73	4.73	4.73	4.74	4.74	4.74	4.74	4.75
18.00	DISCHG	4.75	4.75	4.76	4.76	4.76	4.76	4.77	4.77	4.77	4.78
19.00	DISCHG	4.78	4.78	4.78	4.74	4.64	4.47	4.24	3.98	3.71	3.45
20.00	DISCHG	3.19	2.94	2.72	2.58	2.57	2.71	2.98	3.30	3.59	3.78
21.00	DISCHG	3.84	3.79	3.67	3.55	3.45	3.42	3.44	3.49	3.55	3.57
22.00	DISCHG	3.54	3.47	3.37	3.28	3.19	3.11	3.06	3.02	2.98	2.96
23.00	DISCHG	2.95	2.94	2.93	2.95	2.99	3.07	3.18	3.28	3.32	3.23
24.00	DISCHG	2.97	2.58	2.12	1.67	1.28	.95	.69	.49	.34	.24
25.00	DISCHG	.16	.11	.07	.05	.03	.02	.01	.00		

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	794.96	(RUNOFF)
10.41	27.43	(RUNOFF)
11.61	24.97	(RUNOFF)
12.61	25.11	(RUNOFF)
14.11	25.15	(RUNOFF)
18.94	14.36	(RUNOFF)
20.64	12.77	(RUNOFF)
21.60	11.05	(RUNOFF)
23.53	10.60	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	196.15	(RUNOFF)
10.41	9.86	(RUNOFF)
11.72	8.42	(RUNOFF)
12.72	8.50	(RUNOFF)
14.24	8.36	(RUNOFF)
18.96	5.25	(RUNOFF)
23.59	3.67	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.53	177.12	5493.14
10.55	9.85	5490.39
11.89	8.21	5490.33
12.89	8.26	5490.33
14.42	8.09	5490.32
19.06	5.25	5490.21
23.75	3.59	5490.14

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS
 PAGE 1.

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	431.91	(RUNOFF)
7.45	32.37	(RUNOFF)
10.42	13.59	(RUNOFF)
11.55	12.98	(RUNOFF)
12.55	13.12	(RUNOFF)
14.05	13.19	(RUNOFF)
18.95	7.20	(RUNOFF)
20.57	6.76	(RUNOFF)
21.55	5.64	(RUNOFF)
23.49	5.51	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	489.95	5495.33
10.44	23.43	5490.70
11.58	20.33	5490.63
12.58	20.37	5490.63
14.10	19.90	5490.62
18.95	12.44	5490.46
20.62	10.12	5490.40
21.56	9.41	5490.38
23.51	8.90	5490.36

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.05 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.50	1.05	5504.29

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.72 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.03
6.00	DISCHG	.08	.14	.22	.29	.54
7.00	DISCHG	.56	.58	.60	.61	.68
8.00	DISCHG	.69	.69	.70	.71	.74
9.00	DISCHG	.74	.75	.75	.76	.78

10.00	DISCHG	.78	.78	.79	.79	.79	.80	.80	.80	.81	.81
11.00	DISCHG	.81	.82	.82	.82	.82	.83	.83	.83	.84	.84
12.00	DISCHG	.84	.84	.84	.85	.85	.85	.86	.86	.86	.86
13.00	DISCHG	.87	.87	.87	.87	.88	.88	.88	.88	.88	.89
14.00	DISCHG	.89	.89	.90	.90	.90	.90	.91	.91	.91	.91

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 1
PAGE 15

15.00	DISCHG	.91	.92	.92	.92	.92	.92	.93	.93	.93	.93
16.00	DISCHG	.93	.94	.94	.94	.94	.94	.94	.95	.95	.95
17.00	DISCHG	.95	.95	.95	.96	.96	.96	.96	.96	.97	.97
18.00	DISCHG	.97	.97	.97	.97	.98	.98	.98	.98	.98	.99
19.00	DISCHG	.99	.99	.99	.99	.99	1.00	1.00	1.00	1.00	1.00
20.00	DISCHG	1.00	1.00	1.00	1.00	1.01	1.01	1.01	1.01	1.01	1.01
21.00	DISCHG	1.01	1.01	1.02	1.02	1.02	1.02	1.02	1.02	1.02	1.03
22.00	DISCHG	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.04
23.00	DISCHG	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.05	1.05	1.05
24.00	DISCHG	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
25.00	DISCHG	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
26.00	DISCHG	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
27.00	DISCHG	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
28.00	DISCHG	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
29.00	DISCHG	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

) *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 1.04 CFS, 99.19 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.04 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.30	1.04	5420.04

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	473.97	(RUNOFF)
10.42	16.75	(RUNOFF)
11.60	15.36	(RUNOFF)
12.60	15.46	(RUNOFF)
14.10	15.50	(RUNOFF)
18.95	8.83	(RUNOFF)
20.63	7.91	(RUNOFF)
21.59	6.80	(RUNOFF)
23.53	6.53	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	473.97	5425.89
10.44	17.48	5420.61
11.60	16.14	5420.57
12.60	16.27	5420.57
14.10	16.36	5420.57
18.95	9.79	5420.39
20.63	8.89	5420.36
21.59	7.80	5420.31
23.53	7.55	5420.30

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	405.13	5307.38
10.56	17.48	5300.88
11.77	15.43	5300.80
12.77	15.57	5300.81
14.28	15.57	5300.81
19.06	9.78	5300.59
20.82	8.50	5300.51
21.76	7.67	5300.46
23.67	7.37	5300.44

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.12	888.27	(RUNOFF)
10.45	25.16	(RUNOFF)
11.56	23.68	(RUNOFF)
12.56	23.79	(RUNOFF)
14.06	23.88	(RUNOFF)
18.91	13.02	(RUNOFF)
20.58	12.15	(RUNOFF)
21.55	10.16	(RUNOFF)
23.49	9.85	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 1
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	1145.51	5316.02
10.46	42.60	5301.82
11.61	37.91	5301.65
12.61	38.12	5301.65

14.12	38.03	5301.65
18.95	22.81	5301.08
20.64	19.84	5300.97
21.60	17.61	5300.89
23.53	16.88	5300.86

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 1

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 58

TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 3.50 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 2 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	487.39	(RUNOFF)
10.45	19.43	(RUNOFF)
11.57	18.19	(RUNOFF)
12.57	18.46	(RUNOFF)
14.08	18.59	(RUNOFF)
18.92	10.47	(RUNOFF)
20.60	9.63	(RUNOFF)
21.57	8.17	(RUNOFF)
23.50	7.91	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
PAGE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	467.26	(RUNOFF)
10.46	18.80	(RUNOFF)
11.60	17.19	(RUNOFF)
12.60	17.35	(RUNOFF)
14.11	17.42	(RUNOFF)
18.95	10.04	(RUNOFF)
20.63	8.96	(RUNOFF)
21.60	7.74	(RUNOFF)
23.53	7.44	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	952.25	5691.81
10.45	38.28	5681.35
11.59	35.35	5681.26
12.59	35.79	5681.27
14.09	35.98	5681.28
18.93	20.49	5680.81
20.61	18.57	5680.76
21.58	15.91	5680.68
23.51	15.35	5680.66

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	141.37	(RUNOFF)
10.46	6.63	(RUNOFF)
11.61	6.05	(RUNOFF)
12.61	6.12	(RUNOFF)
14.12	6.17	(RUNOFF)
18.95	3.59	(RUNOFF)
23.53	2.67	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
 PAGE 15

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	1092.02	5710.44
10.45	44.91	5701.27
11.59	41.39	5701.18
12.59	41.89	5701.20
14.10	42.14	5701.20
18.93	24.09	5700.75
20.62	21.77	5700.69
21.58	18.68	5700.62
23.52	18.01	5700.60

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 50 BY 91.2 CFS

OPERATION REACH CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.53	758.14	5500.94
10.67	44.73	5491.73
11.90	37.95	5491.51
12.91	38.17	5491.52
14.43	37.57	5491.50
19.16	24.07	5491.06
20.98	19.38	5490.90
21.88	18.07	5490.86

23.79

16.93

5490.83

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	289.80	(RUNOFF)
10.37	10.03	(RUNOFF)
11.70	8.61	(RUNOFF)
12.70	8.54	(RUNOFF)
14.22	8.45	(RUNOFF)
18.86	5.14	(RUNOFF)
23.59	3.60	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXTJOB 1 PASS 2
PAGE 20

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	974.75	5503.41
10.49	54.65	5492.08
11.86	45.95	5491.77
12.87	46.13	5491.77
14.40	45.36	5491.75
18.97	29.17	5491.22
20.95	23.38	5491.04
21.85	21.79	5490.98
23.75	20.16	5490.93

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	2659.53	(RUNOFF)
10.37	55.85	(RUNOFF)
11.52	53.74	(RUNOFF)
12.52	53.88	(RUNOFF)
14.02	54.05	(RUNOFF)
18.87	28.32	(RUNOFF)
20.53	27.07	(RUNOFF)
21.51	22.25	(RUNOFF)
23.47	21.78	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	2959.33	5507.86
10.40	110.46	5491.65
11.56	94.71	5491.52
12.57	94.42	5491.51
14.09	91.79	5491.47
18.92	57.47	5490.92

20.61	45.91	5490.74
21.55	43.24	5490.70
23.50	40.66	5490.66

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 1951.0 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	2910.98	5490.33
10.50	110.45	5463.19
11.67	94.38	5462.92
12.68	94.05	5462.91
14.20	91.33	5462.82
19.03	57.47	5461.74
20.73	45.70	5461.38
21.66	43.19	5461.31
23.61	40.51	5461.24

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	196.52	(RUNOFF)
10.43	7.45	(RUNOFF)
11.61	6.75	(RUNOFF)
12.61	6.81	(RUNOFF)
14.12	6.82	(RUNOFF)
18.95	3.95	(RUNOFF)
23.54	2.90	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	3107.21	5492.25
10.47	117.91	5463.26
11.67	101.06	5463.11
12.67	100.78	5463.11
14.19	98.02	5463.04
18.98	61.41	5461.87
20.72	49.13	5461.48
21.65	46.21	5461.40
23.60	43.38	5461.32

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.87 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
 24.70 3.87 5483.25

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 3.52 SQ.MI.
 5.00 DISCHG .00 .00 .00 .00 .00 .00 .00 .01 .05 .15
 6.00 DISCHG .33 .58 .88 1.17 1.42 1.62 1.78 1.93 2.05 2.15

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
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7.00	DISCHG	2.24	2.31	2.37	2.42	2.47	2.51	2.55	2.59	2.62	2.65
8.00	DISCHG	2.68	2.71	2.73	2.76	2.78	2.80	2.81	2.83	2.85	2.86
9.00	DISCHG	2.88	2.89	2.90	2.91	2.93	2.94	2.95	2.96	2.97	2.98
10.00	DISCHG	3.00	3.01	3.02	3.03	3.04	3.05	3.07	3.08	3.09	3.10
11.00	DISCHG	3.11	3.12	3.12	3.13	3.14	3.15	3.16	3.17	3.18	3.19
12.00	DISCHG	3.20	3.20	3.21	3.22	3.23	3.24	3.25	3.26	3.27	3.28
13.00	DISCHG	3.28	3.29	3.30	3.31	3.31	3.32	3.33	3.33	3.34	3.35
14.00	DISCHG	3.36	3.36	3.37	3.38	3.39	3.40	3.41	3.42	3.42	3.43
15.00	DISCHG	3.44	3.44	3.45	3.46	3.46	3.47	3.47	3.48	3.49	3.49
16.00	DISCHG	3.50	3.50	3.51	3.51	3.52	3.53	3.53	3.54	3.54	3.55
17.00	DISCHG	3.55	3.56	3.57	3.57	3.58	3.58	3.59	3.60	3.60	3.61
18.00	DISCHG	3.61	3.62	3.62	3.63	3.64	3.64	3.65	3.65	3.66	3.67
19.00	DISCHG	3.67	3.68	3.68	3.69	3.69	3.70	3.70	3.71	3.71	3.72
20.00	DISCHG	3.72	3.72	3.72	3.73	3.73	3.73	3.74	3.74	3.75	3.75
21.00	DISCHG	3.76	3.76	3.77	3.77	3.77	3.78	3.78	3.79	3.79	3.79
22.00	DISCHG	3.80	3.80	3.81	3.81	3.81	3.82	3.82	3.82	3.83	3.83
23.00	DISCHG	3.83	3.84	3.84	3.84	3.85	3.85	3.86	3.86	3.86	3.87
24.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
25.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
26.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.86	3.86	3.86	3.86
28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

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

*** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 3.86 CFS, 99.51 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.87 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
 25.10 3.87 5420.12

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	155.75	(RUNOFF)
10.43	5.49	(RUNOFF)
11.57	5.12	(RUNOFF)
12.57	5.19	(RUNOFF)
14.08	5.21	(RUNOFF)
18.91	2.91	(RUNOFF)
23.50	2.19	(RUNOFF)

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
PAGE 2

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	155.82	5422.80
10.46	8.48	5420.25
11.58	8.23	5420.25
12.58	8.38	5420.25
14.08	8.53	5420.26
18.96	6.55	5420.20
23.51	6.02	5420.18

OPERATION REACH CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	122.65	5362.57
10.58	8.45	5360.25
11.77	7.89	5360.24
12.77	8.03	5360.24
14.28	8.14	5360.24
19.08	6.54	5360.20
23.67	5.93	5360.18

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	368.51	(RUNOFF)
10.46	13.56	(RUNOFF)
11.61	12.32	(RUNOFF)
12.60	12.44	(RUNOFF)
14.11	12.46	(RUNOFF)
18.88	7.13	(RUNOFF)
20.64	6.35	(RUNOFF)
21.60	5.49	(RUNOFF)
23.53	5.26	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	469.95	5365.17

10.46	21.99	5360.57
11.64	19.97	5360.52
12.64	20.21	5360.53
14.15	20.32	5360.53
18.95	13.66	5360.38
20.68	12.39	5360.35
21.63	11.40	5360.33
23.56	11.15	5360.33

OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	469.96	5363.93
10.47	21.99	5360.24
11.64	19.97	5360.22
12.64	20.20	5360.22
14.15	20.32	5360.23
18.95	13.67	5360.15
20.69	12.39	5360.14
21.64	11.40	5360.13
23.56	11.15	5360.12

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.14 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.54	10.53	46.65	130.14	
6.00	DISCHG	248.87	380.93	462.31	454.72	383.51	293.45	222.23	170.01	129.00	
7.00	DISCHG	82.65	71.60	61.63	57.22	52.59	50.95	48.60	47.67	45.58	
8.00	DISCHG	42.35	41.12	38.71	35.58	31.72	28.60	26.09	24.55	23.40	
9.00	DISCHG	22.24	22.00	21.80	21.74	21.67	21.68	21.67	21.71	21.72	
10.00	DISCHG	21.79	21.84	21.87	21.91	21.94	21.97	21.79	21.05	19.57	
11.00	DISCHG	16.21	15.26	15.24	16.21	17.66	19.02	19.88	19.82	18.85	
12.00	DISCHG	16.07	15.21	15.32	16.33	17.80	19.20	20.11	20.04	19.06	
13.00	DISCHG	16.23	15.17	14.45	13.96	13.63	13.44	13.53	14.25	15.71	
14.00	DISCHG	19.18	20.17	20.22	19.28	17.83	16.44	15.38	14.67	14.18	
15.00	DISCHG	13.64	13.51	13.42	13.37	13.34	13.32	13.32	13.32	13.33	
16.00	DISCHG	13.35	13.36	13.37	13.38	13.39	13.40	13.41	13.42	13.43	
17.00	DISCHG	13.46	13.47	13.48	13.49	13.50	13.51	13.52	13.53	13.54	
18.00	DISCHG	13.56	13.57	13.58	13.59	13.60	13.62	13.63	13.64	13.65	
19.00	DISCHG	13.66	13.58	13.25	12.64	11.91	11.23	10.68	10.18	9.64	
20.00	DISCHG	8.68	8.50	8.80	9.59	10.62	11.59	12.22	12.38	12.11	
21.00	DISCHG	11.05	10.70	10.59	10.72	10.98	11.23	11.39	11.37	11.15	
22.00	DISCHG	10.55	10.32	10.17	10.07	10.01	9.96	9.94	9.92	9.92	
23.00	DISCHG	9.92	9.96	10.12	10.40	10.75	11.05	11.11	10.62	9.55	
24.00	DISCHG	6.92	5.98	5.32	4.85	4.52	4.29	4.14	4.04	3.97	
25.00	DISCHG	3.90	3.88	3.88	3.87	3.87	3.87	3.87	3.87	3.87	
26.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
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27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.86	3.87
28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.42	420.69	5314.06
10.58	21.94	5310.64
11.81	19.45	5310.59
12.81	19.66	5310.59
14.32	19.71	5310.59
19.06	13.66	5310.47
20.87	12.08	5310.44
21.79	11.31	5310.43
23.70	10.96	5310.42

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	175.99	(RUNOFF)
10.43	7.42	(RUNOFF)
11.61	6.78	(RUNOFF)
12.61	6.85	(RUNOFF)
14.12	6.89	(RUNOFF)
18.94	3.99	(RUNOFF)
23.54	2.95	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	549.95	5314.80
10.48	29.33	5310.79
11.74	25.66	5310.71
12.74	25.94	5310.72
14.25	25.95	5310.72
18.97	17.63	5310.55
20.80	15.32	5310.51
21.72	14.28	5310.49
23.62	13.73	5310.47

OPERATION RUNOFF CROSS SECTION 34

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TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TYT

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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	115.90	(RUNOFF)
7.47	10.13	(RUNOFF)
10.45	4.39	(RUNOFF)
11.54	4.21	(RUNOFF)
12.54	4.26	(RUNOFF)
14.04	4.32	(RUNOFF)
18.95	2.39	(RUNOFF)
23.48	1.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.32	614.42	5395.99
10.46	33.72	5390.77
11.68	29.34	5390.69
12.69	29.65	5390.69
14.20	29.65	5390.69
18.96	20.02	5390.50
20.75	17.22	5390.44
21.67	16.06	5390.42
23.57	15.48	5390.41

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.51	512.19	5315.94
7.45	91.09	5311.45
10.48	33.70	5310.54
11.71	29.31	5310.47
12.71	29.61	5310.47
14.23	29.61	5310.47
18.97	20.01	5310.32
20.78	17.19	5310.27
21.69	16.05	5310.25
23.59	15.43	5310.25

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.59 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.08	2.57	21.67	87.17
6.00	DISCHG	172.29	288.55	373.02	441.38	492.00	511.90	500.49	465.24	416.19	361.88
7.00	DISCHG	294.39	203.54	154.89	126.13	90.00	90.19	82.43	79.23	75.51	72.61
8.00	DISCHG	69.91	67.39	64.13	59.81	54.83	49.89	45.44	41.81	39.06	37.09
9.00	DISCHG	35.70	34.78	34.17	33.79	33.56	33.43	33.37	33.35	33.37	33.40
10.00	DISCHG	33.44	33.49	33.54	33.60	33.65	33.70	33.57	32.81	31.24	29.15
11.00	DISCHG	26.90	24.98	24.05	24.34	25.52	27.14	28.64	29.31	28.86	27.59
12.00	DISCHG	25.94	24.45	23.81	24.30	25.63	27.34	28.89	29.61	29.18	27.89

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TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
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13.00	DISCHG	26.22	24.52	23.04	21.87	21.02	20.41	20.19	20.74	22.23	24.33
14.00	DISCHG	26.61	28.57	29.56	29.30	28.11	26.49	24.80	23.33	22.18	21.32
15.00	DISCHG	20.71	20.29	20.01	19.83	19.71	19.63	19.59	19.57	19.56	19.56
16.00	DISCHG	19.57	19.58	19.60	19.61	19.62	19.64	19.65	19.67	19.68	19.70
17.00	DISCHG	19.71	19.73	19.74	19.76	19.77	19.79	19.80	19.82	19.83	19.85
18.00	DISCHG	19.86	19.88	19.89	19.91	19.92	19.94	19.95	19.97	19.98	20.00
19.00	DISCHG	20.01	19.94	19.61	18.92	18.02	17.06	16.13	15.22	14.30	13.43
20.00	DISCHG	12.65	12.12	12.14	12.81	13.93	15.20	16.36	17.06	17.18	16.86
21.00	DISCHG	16.33	15.76	15.39	15.30	15.44	15.70	15.95	16.05	15.92	15.62
22.00	DISCHG	15.26	14.89	14.57	14.33	14.15	14.02	13.93	13.88	13.84	13.82
23.00	DISCHG	13.81	13.84	14.00	14.32	14.74	15.18	15.43	15.11	14.03	12.48
24.00	DISCHG	10.76	9.11	7.71	6.61	5.78	5.18	4.75	4.45	4.25	4.11
25.00	DISCHG	4.02	3.96	3.92	3.90	3.88	3.88	3.87	3.87	3.87	3.87
26.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.86	3.87	3.86

28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.80	445.12	5253.05
10.61	33.63	5250.50
11.92	28.14	5250.43
12.93	28.25	5250.43
14.48	27.72	5250.42
19.10	19.98	5250.32
21.87	15.87	5250.27
23.77	14.94	5250.26

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	57.45	(RUNOFF)
14.39	3.69	(RUNOFF)
18.97	2.50	(RUNOFF)
23.66	1.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 2
 PAGE 4

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.77	494.15	5253.27
10.57	38.22	5250.55
11.91	31.90	5250.47
12.92	31.99	5250.48
14.47	31.38	5250.47
19.07	22.48	5250.36
21.87	17.72	5250.30
23.76	16.61	5250.28

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.83	490.44	5283.91
10.57	38.22	5280.57
11.92	31.89	5280.48
12.93	31.99	5280.48
14.48	31.38	5280.47
19.08	22.48	5280.34
21.88	17.72	5280.26
23.77	16.60	5280.25

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 4.78 SQ.MI.

5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.17	1.72	10.07
6.00	DISCHG	38.34	88.14	160.06	239.48	311.87	380.88	431.06	471.05	489.20	485.71
7.00	DISCHG	464.68	429.70	380.44	313.99	258.68	214.05	169.24	149.71	129.35	116.78
8.00	DISCHG	105.90	98.02	91.41	85.85	80.45	74.97	69.42	63.68	58.59	54.17
9.00	DISCHG	50.36	47.28	44.82	42.94	41.53	40.48	39.71	39.16	38.78	38.52
10.00	DISCHG	38.35	38.25	38.19	38.17	38.18	38.20	38.21	38.16	37.86	37.09
11.00	DISCHG	35.81	34.13	32.30	30.70	29.70	29.45	29.85	30.67	31.48	31.88
12.00	DISCHG	31.70	30.98	29.96	29.02	28.53	28.67	29.39	30.43	31.41	31.95
13.00	DISCHG	31.85	31.17	30.08	28.78	27.47	26.27	25.24	24.48	24.16	24.48
14.00	DISCHG	25.45	26.93	28.64	30.18	31.14	31.37	30.93	30.01	28.84	27.62
15.00	DISCHG	26.47	25.48	24.65	23.99	23.46	23.06	22.76	22.54	22.38	22.27
16.00	DISCHG	22.19	22.14	22.11	22.09	22.09	22.09	22.09	22.10	22.11	22.12
17.00	DISCHG	22.14	22.15	22.17	22.18	22.20	22.21	22.23	22.25	22.27	22.28
18.00	DISCHG	22.30	22.32	22.33	22.35	22.37	22.38	22.40	22.42	22.43	22.45
19.00	DISCHG	22.46	22.47	22.45	22.31	21.98	21.42	20.68	19.84	18.93	17.97
20.00	DISCHG	17.00	16.07	15.26	14.70	14.56	14.86	15.53	16.40	17.25	17.88
21.00	DISCHG	18.20	18.23	18.03	17.76	17.54	17.44	17.46	17.57	17.68	17.72
22.00	DISCHG	17.63	17.44	17.17	16.87	16.58	16.31	16.08	15.90	15.75	15.64
23.00	DISCHG	15.55	15.49	15.47	15.51	15.65	15.89	16.21	16.50	16.59	16.27
24.00	DISCHG	15.49	14.32	12.93	11.46	10.05	8.79	7.71	6.82	6.11	5.54
25.00	DISCHG	5.11	4.78	4.53	4.35	4.21	4.11	4.04	3.99	3.95	3.93
26.00	DISCHG	3.91	3.90	3.89	3.88	3.88	3.87	3.87	3.87	3.87	3.87
27.00	DISCHG	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.86	3.86
28.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86

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TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
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29.00	DISCHG	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86	3.86
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OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	171.19	(RUNOFF)
10.44	7.78	(RUNOFF)
11.62	7.06	(RUNOFF)
12.62	7.13	(RUNOFF)
14.12	7.17	(RUNOFF)
18.90	4.20	(RUNOFF)
23.55	3.10	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.44	135.23	5250.90
10.57	7.77	5250.08
11.81	6.65	5250.07
12.82	6.70	5250.07
14.33	6.66	5250.07
19.05	4.19	5250.04
23.70	2.97	5250.03

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.85	74.32	5327.86
10.62	7.75	5320.86
11.92	6.49	5320.72
12.93	6.53	5320.73
14.46	6.46	5320.72
19.08	4.19	5320.47
23.78	2.91	5320.32

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .30 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00	.00 .00 .00 .00	.00 .21 1.73
6.00 DISCHG	7.24 19.67 33.99 48.70	57.67 66.44 71.42	73.33 74.22 74.24
7.00 DISCHG	73.54 72.31 70.70 67.31	62.85 58.50 54.34	50.47 46.91 41.25
8.00 DISCHG	33.75 28.43 24.62 21.81	19.61 17.57 14.82	12.94 11.54 10.48
9.00 DISCHG	9.67 9.08 8.64 8.33	8.11 7.96 7.86	7.79 7.75 7.73
10.00 DISCHG	7.71 7.71 7.72 7.72	7.73 7.74 7.75	7.75 7.69 7.51
11.00 DISCHG	7.18 6.72 6.23 5.81	5.57 5.56 5.76	6.06 6.34 6.49
12.00 DISCHG	6.43 6.19 5.86 5.56	5.42 5.47 5.72	6.05 6.36 6.52
13.00 DISCHG	6.48 6.25 5.91 5.53	5.19 4.90 4.66	4.50 4.44 4.55
14.00 DISCHG	4.83 5.27 5.76 6.19	6.43 6.44 6.25	5.93 5.57 5.23

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS
PAGE 1

15.00 DISCHG	4.95 4.72 4.54 4.41	4.32 4.25 4.20	4.17 4.15 4.13
16.00 DISCHG	4.13 4.12 4.12 4.12	4.12 4.12 4.12	4.13 4.13 4.13
17.00 DISCHG	4.14 4.14 4.14 4.14	4.15 4.15 4.15	4.15 4.16 4.16
18.00 DISCHG	4.16 4.17 4.17 4.17	4.17 4.18 4.18	4.18 4.18 4.19
19.00 DISCHG	4.19 4.19 4.19 4.16	4.08 3.93 3.74	3.51 3.28 3.06
20.00 DISCHG	2.83 2.61 2.42 2.29	2.27 2.38 2.60	2.87 3.12 3.29
21.00 DISCHG	3.35 3.32 3.23 3.12	3.04 3.01 3.02	3.07 3.11 3.13
22.00 DISCHG	3.11 3.05 2.97 2.89	2.81 2.75 2.70	2.66 2.63 2.61
23.00 DISCHG	2.59 2.58 2.58 2.59	2.62 2.69 2.78	2.87 2.91 2.84
24.00 DISCHG	2.62 2.29 1.90 1.52	1.17 .88 .65	.47 .33 .23
25.00 DISCHG	.16 .11 .07 .05	.03 .02 .01	.00

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	679.14	(RUNOFF)
10.42	24.36	(RUNOFF)
11.61	22.19	(RUNOFF)
12.61	22.33	(RUNOFF)
14.11	22.39	(RUNOFF)
18.95	12.81	(RUNOFF)
20.64	11.40	(RUNOFF)
21.60	9.86	(RUNOFF)
23.53	9.47	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.34	163.38	(RUNOFF)

10.42	8.65	(RUNOFF)
11.72	7.40	(RUNOFF)
12.72	7.48	(RUNOFF)
14.24	7.36	(RUNOFF)
18.96	4.64	(RUNOFF)
23.59	3.24	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	146.30	5492.92
10.55	8.65	5490.35
11.89	7.20	5490.29
12.90	7.25	5490.29
14.43	7.11	5490.28
19.07	4.63	5490.19
23.75	3.18	5490.13

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
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OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	364.84	(RUNOFF)
7.45	28.35	(RUNOFF)
10.43	11.97	(RUNOFF)
11.55	11.45	(RUNOFF)
12.55	11.58	(RUNOFF)
14.05	11.65	(RUNOFF)
18.95	6.38	(RUNOFF)
20.57	5.99	(RUNOFF)
21.55	5.00	(RUNOFF)
23.49	4.88	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	410.40	5494.77
10.45	20.65	5490.64
11.57	17.90	5490.58
12.58	17.94	5490.58
14.10	17.53	5490.57
18.95	11.00	5490.42
20.62	8.95	5490.36
21.56	8.34	5490.33
23.51	7.88	5490.32

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .90 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
 24.50 .90 5503.38

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.72 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.02
6.00	DISCHG	.06	.11	.18	.24	.45
7.00	DISCHG	.47	.49	.50	.51	.57
8.00	DISCHG	.58	.58	.59	.59	.62
9.00	DISCHG	.62	.63	.63	.64	.65
10.00	DISCHG	.66	.66	.66	.67	.68
11.00	DISCHG	.69	.69	.69	.70	.71
12.00	DISCHG	.71	.71	.72	.72	.73
13.00	DISCHG	.74	.74	.74	.74	.75
14.00	DISCHG	.76	.76	.76	.77	.78

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS
 PAGE 32

15.00	DISCHG	.78	.78	.78	.78	.78	.79	.79	.79	.79	.79
16.00	DISCHG	.79	.80	.80	.80	.80	.80	.80	.80	.81	.81
17.00	DISCHG	.81	.81	.81	.81	.82	.82	.82	.82	.82	.82
18.00	DISCHG	.83	.83	.83	.83	.83	.83	.84	.84	.84	.84
19.00	DISCHG	.84	.84	.85	.85	.85	.85	.85	.85	.85	.85
20.00	DISCHG	.85	.86	.86	.86	.86	.86	.86	.86	.86	.86
21.00	DISCHG	.87	.87	.87	.87	.87	.87	.87	.87	.87	.88
22.00	DISCHG	.88	.88	.88	.88	.88	.88	.88	.88	.88	.89
23.00	DISCHG	.89	.89	.89	.89	.89	.89	.89	.89	.89	.89
24.00	DISCHG	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
25.00	DISCHG	.90	.90	.90	.90	.90	.90	.90	.90	.89	.89
26.00	DISCHG	.89	.89	.89	.89	.89	.89	.89	.89	.89	.89
27.00	DISCHG	.89	.89	.89	.89	.89	.89	.89	.89	.89	.89
28.00	DISCHG	.89	.89	.89	.89	.89	.89	.89	.89	.89	.89
29.00	DISCHG	.89	.89	.89	.89	.89	.89	.89	.89	.89	.89

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.
 0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .89 CFS, 99.20 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .89 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
 25.40 .89 5420.04

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	402.06	(RUNOFF)
10.43	14.81	(RUNOFF)
11.60	13.60	(RUNOFF)
12.60	13.69	(RUNOFF)
14.10	13.75	(RUNOFF)
18.95	7.85	(RUNOFF)

20.63	7.03	(RUNOFF)
21.59	6.05	(RUNOFF)
23.53	5.81	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TYT

JOB 1 PASS 2
 PAGE 33

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	402.06	5425.32
10.45	15.44	5420.55
11.60	14.25	5420.52
12.60	14.37	5420.52
14.10	14.46	5420.52
18.95	8.66	5420.35
20.63	7.87	5420.31
21.59	6.89	5420.28
23.53	6.68	5420.27

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	339.57	5306.68
10.56	15.40	5300.80
11.77	13.58	5300.73
12.78	13.72	5300.74
14.29	13.72	5300.74
19.06	8.65	5300.52
20.82	7.49	5300.45
21.76	6.77	5300.41
23.68	6.51	5300.39

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	768.20	(RUNOFF)
10.45	22.47	(RUNOFF)
11.56	21.17	(RUNOFF)
12.56	21.28	(RUNOFF)
14.06	21.37	(RUNOFF)
18.91	11.68	(RUNOFF)
20.58	10.90	(RUNOFF)
21.55	9.12	(RUNOFF)
23.49	8.84	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 2
PAGE 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	977.85	5314.04
10.46	37.85	5301.64
11.60	33.67	5301.49
12.61	33.88	5301.50
14.12	33.81	5301.49
18.95	20.34	5300.99
20.64	17.66	5300.89
21.60	15.70	5300.81
23.53	15.05	5300.79

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

+ COMPUTATIONS COMPLETED FOR PASS 2

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

+ MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

+ FROM XSECTION 58

+ TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 3.10 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 3 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	362.17	(RUNOFF)
10.45	15.76	(RUNOFF)
11.57	14.75	(RUNOFF)
12.57	14.99	(RUNOFF)
14.08	15.13	(RUNOFF)
18.93	8.57	(RUNOFF)
20.60	7.89	(RUNOFF)
21.57	6.69	(RUNOFF)
23.50	6.49	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS
PAGE 35

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	353.30	(RUNOFF)

10.46	15.37	(RUNOFF)
11.60	14.08	(RUNOFF)
12.60	14.23	(RUNOFF)
14.11	14.32	(RUNOFF)
18.95	8.29	(RUNOFF)
20.63	7.41	(RUNOFF)
21.60	6.40	(RUNOFF)
23.53	6.16	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	713.80	5689.38
10.45	31.13	5681.13
11.59	28.80	5681.06
12.59	29.20	5681.08
14.09	29.42	5681.08
18.94	16.84	5680.71
20.61	15.28	5680.66
21.58	13.09	5680.59
23.51	12.65	5680.58

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	102.69	(RUNOFF)
10.46	5.32	(RUNOFF)
11.61	4.86	(RUNOFF)
12.61	4.93	(RUNOFF)
14.12	4.98	(RUNOFF)
18.95	2.92	(RUNOFF)
23.53	2.17	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	815.19	5708.22
10.46	36.45	5701.06
11.59	33.66	5700.99
12.59	34.12	5701.00
14.10	34.39	5701.01
18.95	19.76	5700.64
20.62	17.88	5700.60
21.58	15.35	5700.53
23.52	14.82	5700.52

OPERATION REACH CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.55	545.32	5498.52
10.67	36.29	5491.45
11.90	30.74	5491.27
12.91	30.92	5491.28
14.44	30.41	5491.26
19.16	19.73	5490.92
20.99	15.79	5490.79
21.88	14.82	5490.76
23.80	13.87	5490.73

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	238.87	(RUNOFF)
10.38	8.63	(RUNOFF)
11.70	7.42	(RUNOFF)
12.70	7.36	(RUNOFF)
14.22	7.29	(RUNOFF)
18.87	4.44	(RUNOFF)
23.59	3.11	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS
PAGE 5,

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	721.43	5500.52
10.49	44.82	5491.73
11.86	37.62	5491.50
12.87	37.76	5491.50
14.40	37.11	5491.48
18.98	24.14	5491.06
20.95	19.24	5490.90
21.85	18.04	5490.86
23.74	16.66	5490.82

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.06	2256.96	(RUNOFF)
10.37	48.60	(RUNOFF)
11.52	46.79	(RUNOFF)
12.52	46.93	(RUNOFF)
14.02	47.10	(RUNOFF)
18.87	24.71	(RUNOFF)
20.53	23.63	(RUNOFF)
21.51	19.42	(RUNOFF)
23.47	19.02	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	2479.59	5505.08
10.40	93.39	5491.49
11.56	80.59	5491.29
12.57	80.32	5491.29
14.08	78.10	5491.25
18.93	48.83	5490.78
20.61	39.20	5490.64
21.55	36.78	5490.60
23.49	34.67	5490.57

*** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 1471.3 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
 PAGE 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	2428.59	5485.60
10.50	93.38	5462.89
11.67	80.26	5462.47
12.68	79.95	5462.46
14.19	77.64	5462.38
19.05	48.83	5461.47
20.72	38.99	5461.20
21.66	36.80	5461.14
23.60	34.52	5461.07

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	151.98	(RUNOFF)
10.44	6.16	(RUNOFF)
11.62	5.59	(RUNOFF)
12.61	5.66	(RUNOFF)
14.12	5.67	(RUNOFF)
18.95	3.29	(RUNOFF)
23.54	2.42	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	2580.08	5487.08
10.47	99.55	5463.09
11.67	85.81	5462.65
12.67	85.54	5462.64
14.19	83.21	5462.56
18.98	52.12	5461.57

20.71	41.86	5461.28
21.65	39.32	5461.21
23.60	36.92	5461.14

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.18 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.80	3.18	5479.09

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.52 SQ.MI.
5.00	DISCHG	.00	.00	.00	.01	.03
6.00	DISCHG	.25	.46	.71	.95	1.16
					1.31	1.45
					1.56	1.65
						1.73

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS
PAGE 39

7.00	DISCHG	1.80	1.86	1.91	1.95	1.99	2.03	2.06	2.09	2.12	2.14
8.00	DISCHG	2.17	2.19	2.21	2.23	2.25	2.27	2.28	2.30	2.31	2.32
9.00	DISCHG	2.33	2.34	2.36	2.37	2.38	2.39	2.40	2.41	2.42	2.43
10.00	DISCHG	2.44	2.45	2.46	2.47	2.48	2.49	2.49	2.50	2.51	2.52
11.00	DISCHG	2.53	2.54	2.54	2.55	2.56	2.57	2.57	2.58	2.59	2.60
12.00	DISCHG	2.61	2.61	2.62	2.63	2.63	2.64	2.65	2.66	2.66	2.67
13.00	DISCHG	2.68	2.69	2.69	2.70	2.70	2.71	2.72	2.72	2.73	2.73
14.00	DISCHG	2.74	2.75	2.76	2.76	2.77	2.78	2.79	2.79	2.80	2.80
15.00	DISCHG	2.81	2.81	2.82	2.83	2.83	2.84	2.84	2.85	2.85	2.86
16.00	DISCHG	2.86	2.87	2.87	2.88	2.88	2.89	2.89	2.89	2.90	2.90
17.00	DISCHG	2.91	2.91	2.92	2.92	2.93	2.93	2.94	2.94	2.95	2.95
18.00	DISCHG	2.96	2.96	2.97	2.97	2.98	2.98	2.99	2.99	3.00	3.00
19.00	DISCHG	3.01	3.01	3.02	3.02	3.03	3.03	3.04	3.04	3.04	3.05
20.00	DISCHG	3.05	3.05	3.05	3.06	3.06	3.06	3.07	3.07	3.07	3.08
21.00	DISCHG	3.08	3.09	3.09	3.09	3.10	3.10	3.10	3.11	3.11	3.11
22.00	DISCHG	3.12	3.12	3.12	3.13	3.13	3.13	3.14	3.14	3.14	3.14
23.00	DISCHG	3.15	3.15	3.15	3.16	3.16	3.16	3.17	3.17	3.17	3.17
24.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
25.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
26.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
27.00	DISCHG	3.18	3.18	3.18	3.18	3.17	3.17	3.17	3.17	3.17	3.17
28.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
29.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17

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

0 *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 3.17 CFS, 99.51 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 3.18 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.20	3.18	5420.10

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	120.04	(RUNOFF)
10.44	4.53	(RUNOFF)
11.57	4.23	(RUNOFF)
12.57	4.29	(RUNOFF)
14.08	4.32	(RUNOFF)
18.91	2.42	(RUNOFF)
23.50	1.83	(RUNOFF)

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	120.06	5422.55
10.46	6.95	5420.21
11.58	6.75	5420.20
12.58	6.89	5420.21
14.08	7.02	5420.21
18.96	5.40	5420.16
23.51	4.97	5420.15

OPERATION REACH CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	91.91	5362.21
10.59	6.92	5360.21
12.77	6.57	5360.20
14.29	6.66	5360.20
19.08	5.39	5360.16
23.67	4.88	5360.15

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	286.92	(RUNOFF)
10.46	11.26	(RUNOFF)
11.61	10.24	(RUNOFF)
12.61	10.36	(RUNOFF)
14.11	10.39	(RUNOFF)
18.89	5.97	(RUNOFF)
20.64	5.32	(RUNOFF)
23.53	4.42	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	361.27	5364.36
10.47	18.16	5360.48
11.64	16.49	5360.45
12.64	16.71	5360.45
14.15	16.82	5360.45
18.95	11.35	5360.33
20.68	10.27	5360.31
21.63	9.47	5360.28
23.56	9.26	5360.28

OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	362.97	5363.22
10.47	18.15	5360.20
11.64	16.49	5360.18
12.64	16.70	5360.19
14.15	16.82	5360.19
18.95	11.35	5360.13
20.69	10.27	5360.11
21.64	9.47	5360.11
23.56	9.26	5360.10

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 4.14 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00	.00 .00 .14	5.83 29.34 89.46
6.00 DISCHG	185.87 281.55 355.55 350.19	299.74 229.72 175.83	132.00 107.20 82.11
7.00 DISCHG	69.70 56.85 52.17 45.82	44.34 41.07 40.70	38.61 37.96 35.94
8.00 DISCHG	35.17 33.55 32.09 29.09	26.29 23.45 21.63	20.18 19.39 18.70
9.00 DISCHG	18.40 18.10 18.01 17.89	17.89 17.85 17.88	17.88 17.93 17.95
10.00 DISCHG	17.99 18.01 18.05 18.08	18.12 18.14 18.00	17.38 16.17 14.71
11.00 DISCHG	13.41 12.63 12.61 13.41	14.61 15.72 16.42	16.37 15.57 14.39
12.00 DISCHG	13.29 12.60 12.69 13.52	14.73 15.88 16.63	16.57 15.76 14.60
13.00 DISCHG	13.44 12.57 11.98 11.57	11.30 11.13 11.21	11.81 13.01 14.50
14.00 DISCHG	15.87 16.69 16.73 15.96	14.77 13.63 12.77	12.18 11.77 11.50
15.00 DISCHG	11.32 11.21 11.13 11.09	11.06 11.04 11.04	11.04 11.05 11.06
16.00 DISCHG	11.07 11.08 11.08 11.09	11.10 11.11 11.12	11.13 11.14 11.15
17.00 DISCHG	11.16 11.17 11.18 11.19	11.20 11.21 11.22	11.23 11.24 11.25
18.00 DISCHG	11.26 11.27 11.28 11.29	11.30 11.31 11.31	11.32 11.33 11.34
19.00 DISCHG	11.34 11.28 11.01 10.50	9.89 9.33 8.88	8.45 8.00 7.57
20.00 DISCHG	7.21 7.06 7.30 7.96	8.81 9.61 10.13	10.27 10.04 9.61
21.00 DISCHG	9.18 8.89 8.80 8.91	9.12 9.33 9.46	9.44 9.26 9.00
22.00 DISCHG	8.76 8.57 8.45 8.37	8.31 8.28 8.26	8.24 8.23 8.23
23.00 DISCHG	8.23 8.27 8.40 8.64	8.93 9.18 9.23	8.82 7.92 6.80
24.00 DISCHG	5.75 4.96 4.42 4.02	3.74 3.54 3.41	3.32 3.27 3.23
25.00 DISCHG	3.21 3.19 3.18 3.18	3.18 3.18 3.18	3.18 3.18 3.18
26.00 DISCHG	3.18 3.18 3.18 3.18	3.18 3.18 3.18	3.18 3.18 3.18

27.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.17	3.18	3.17	3.17
28.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
29.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17

OPERATION REACH CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	318.38	5313.50
10.58	18.12	5310.56
11.81	16.02	5310.52
12.81	16.21	5310.52
14.33	16.26	5310.52
19.06	11.34	5310.43
20.88	9.99	5310.40
21.80	9.39	5310.38
23.70	9.09	5310.36

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	131.65	(RUNOFF)
10.45	6.03	(RUNOFF)
11.61	5.52	(RUNOFF)
12.61	5.59	(RUNOFF)
14.12	5.63	(RUNOFF)
18.95	3.28	(RUNOFF)
23.54	2.43	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	413.55	5314.02
10.49	24.12	5310.68
11.74	21.07	5310.62
12.74	21.32	5310.63
14.26	21.33	5310.63
18.97	14.61	5310.49
20.81	12.64	5310.45
21.72	11.83	5310.44
23.62	11.36	5310.43

OPERATION RUNOFF CROSS SECTION 34

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	84.26	(RUNOFF)
7.48	8.01	(RUNOFF)
10.45	3.51	(RUNOFF)

11.54	3.38	(RUNOFF)
12.54	3.42	(RUNOFF)
14.04	3.48	(RUNOFF)
18.95	1.93	(RUNOFF)
23.48	1.50	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.33	459.84	5394.82
10.47	27.63	5390.65
11.68	24.01	5390.58
12.69	24.29	5390.59
14.21	24.30	5390.59
18.96	16.54	5390.43
20.75	14.17	5390.38
21.67	13.27	5390.37
23.57	12.79	5390.36

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.51	397.57	5314.77
10.48	27.61	5310.44
11.71	23.99	5310.38
12.71	24.26	5310.39
14.23	24.27	5310.39
18.97	16.53	5310.26
20.78	14.15	5310.22
21.69	13.26	5310.21
23.59	12.75	5310.20

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	4.59 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.02
6.00	DISCHG	135.53	207.25	309.54	355.64	385.94
7.00	DISCHG	186.67	148.01	115.66	84.03	80.49
8.00	DISCHG	57.21	55.08	52.49	48.96	44.99
9.00	DISCHG	29.36	28.56	28.03	27.69	27.49
10.00	DISCHG	27.38	27.42	27.47	27.52	27.57
11.00	DISCHG	22.17	20.62	19.85	20.06	20.97
12.00	DISCHG	21.33	20.15	19.64	20.02	21.07
13.00	DISCHG	21.59	20.24	19.04	18.09	17.38

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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14.00	DISCHG	21.81	23.40	24.22	24.03	23.11	21.83	20.50	19.31	18.37	17.66
15.00	DISCHG	17.14	16.78	16.54	16.37	16.26	16.20	16.16	16.13	16.13	16.13
16.00	DISCHG	16.14	16.15	16.16	16.17	16.18	16.20	16.21	16.22	16.24	16.25
17.00	DISCHG	16.26	16.28	16.29	16.30	16.32	16.33	16.35	16.36	16.37	16.39
18.00	DISCHG	16.40	16.41	16.43	16.44	16.45	16.47	16.48	16.49	16.51	16.52
19.00	DISCHG	16.53	16.48	16.21	15.65	14.92	14.14	13.39	12.64	11.88	11.16
20.00	DISCHG	10.51	10.07	10.07	10.61	11.50	12.52	13.46	14.03	14.14	13.90
21.00	DISCHG	13.49	13.04	12.75	12.68	12.78	12.99	13.19	13.26	13.16	12.92

22.00	DISCHG	12.63	12.33	12.07	11.87	11.72	11.61	11.54	11.49	11.46	11.44
23.00	DISCHG	11.43	11.46	11.58	11.84	12.19	12.54	12.75	12.48	11.62	10.36
24.00	DISCHG	8.97	7.62	6.47	5.56	4.86	4.34	3.96	3.70	3.52	3.40
25.00	DISCHG	3.32	3.26	3.22	3.20	3.19	3.19	3.18	3.18	3.18	3.18
26.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.18
27.00	DISCHG	3.18	3.18	3.18	3.18	3.18	3.18	3.18	3.17	3.17	3.17
28.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17
29.00	DISCHG	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17	3.17

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.81	342.04	5252.59
10.62	27.55	5250.42
11.92	23.04	5250.36
12.94	23.11	5250.36
14.50	22.65	5250.36
19.12	16.50	5250.28
21.88	13.11	5250.24
23.78	12.32	5250.23

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	41.03	(RUNOFF)
23.66	1.37	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.78	377.30	5252.75
10.57	31.21	5250.47
11.91	26.04	5250.40
12.93	26.11	5250.40
14.48	25.58	5250.40
19.08	18.52	5250.31
21.87	14.61	5250.26
23.76	13.68	5250.25

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.84	374.37	5283.10
10.58	31.21	5280.47
11.92	26.04	5280.39
12.94	26.10	5280.39
14.50	25.58	5280.38
19.09	18.52	5280.28

21.88	14.61	5280.22
23.77	13.67	5280.20

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	4.78 SQ.MI.
5.00	DISCHG	.00	.00	.00	.05	.77
6.00	DISCHG	21.85	60.72	110.46	179.46	239.94
7.00	DISCHG	351.22	308.81	268.64	229.56	187.73
8.00	DISCHG	86.66	80.27	75.09	70.55	66.13
9.00	DISCHG	41.86	39.25	37.18	35.55	34.31
10.00	DISCHG	31.38	31.27	31.21	31.19	31.18
11.00	DISCHG	29.37	28.07	26.64	25.37	24.55
12.00	DISCHG	25.90	25.37	24.59	23.87	23.48
13.00	DISCHG	26.02	25.52	24.70	23.71	22.69
14.00	DISCHG	20.90	22.02	23.34	24.55	25.34
15.00	DISCHG	21.91	21.11	20.43	19.88	19.43
16.00	DISCHG	18.29	18.24	18.20	18.19	18.18
17.00	DISCHG	18.21	18.23	18.24	18.25	18.27
18.00	DISCHG	18.36	18.37	18.39	18.40	18.42
19.00	DISCHG	18.51	18.52	18.50	18.40	18.14
20.00	DISCHG	14.18	13.42	12.75	12.28	12.12
21.00	DISCHG	14.91	14.96	14.83	14.64	14.48
22.00	DISCHG	14.55	14.40	14.19	13.96	13.72
23.00	DISCHG	12.87	12.82	12.79	12.81	12.92
24.00	DISCHG	12.82	11.92	10.82	9.65	8.52
25.00	DISCHG	4.35	4.05	3.82	3.65	3.52
26.00	DISCHG	3.22	3.21	3.20	3.19	3.18
27.00	DISCHG	3.18	3.18	3.18	3.18	3.17
28.00	DISCHG	3.17	3.17	3.17	3.17	3.17
29.00	DISCHG	3.17	3.17	3.17	3.17	3.17

OPERATION RUNOFF CROSS SECTION 16

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	126.09	(RUNOFF)
10.45	6.29	(RUNOFF)
11.62	5.71	(RUNOFF)
12.62	5.79	(RUNOFF)
14.13	5.83	(RUNOFF)
18.91	3.43	(RUNOFF)
23.55	2.54	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	95.17	5250.76
10.57	6.27	5250.06
11.82	5.35	5250.05
12.83	5.39	5250.05
14.35	5.35	5250.05
19.06	3.43	5250.03

23.70

2.42

5250.02

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.82	61.60	5326.16
10.63	6.26	5320.70
12.94	5.26	5320.58
14.47	5.20	5320.58
19.09	3.42	5320.38
23.79	2.37	5320.26

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .30 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .08 .81		
6.00 DISCHG	3.82 12.11 23.70 37.35 47.91 53.32 57.75 60.52 61.57 61.17		
7.00 DISCHG	59.65 57.30 54.43 51.30 48.08 44.76 36.39 30.28 25.81 22.51		
8.00 DISCHG	20.04 18.15 15.73 14.21 13.13 12.15 11.16 10.20 9.31 8.55		
9.00 DISCHG	7.93 7.45 7.08 6.81 6.61 6.47 6.37 6.31 6.27 6.24		
10.00 DISCHG	6.23 6.23 6.23 6.23 6.24 6.25 6.26 6.26 6.21 6.08		
11.00 DISCHG	5.83 5.49 5.11 4.78 4.57 4.54 4.67 4.89 5.10 5.22		
12.00 DISCHG	5.19 5.02 4.78 4.55 4.42 4.45 4.63 4.88 5.12 5.25		
13.00 DISCHG	5.23 5.07 4.82 4.53 4.26 4.03 3.84 3.70 3.64 3.71		
14.00 DISCHG	3.91 4.24 4.62 4.95 5.16 5.19 5.07 4.84 4.57 4.31		
15.00 DISCHG	4.08 3.89 3.74 3.63 3.54 3.48 3.44 3.41 3.39 3.37		
16.00 DISCHG	3.37 3.36 3.36 3.36 3.36 3.36 3.36 3.36 3.36 3.37		
17.00 DISCHG	3.37 3.37 3.37 3.38 3.38 3.38 3.39 3.39 3.39 3.39		
18.00 DISCHG	3.40 3.40 3.40 3.40 3.41 3.41 3.41 3.41 3.42 3.42		
19.00 DISCHG	3.42 3.42 3.42 3.40 3.34 3.23 3.08 2.90 2.72 2.54		

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20.00 DISCHG	2.36 2.18 2.02 1.91 1.88 1.96 2.12 2.32 2.51 2.65
21.00 DISCHG	2.71 2.70 2.64 2.56 2.50 2.47 2.48 2.51 2.54 2.56
22.00 DISCHG	2.54 2.50 2.44 2.37 2.31 2.26 2.22 2.19 2.16 2.14
23.00 DISCHG	2.13 2.12 2.12 2.12 2.15 2.20 2.27 2.34 2.37 2.32
24.00 DISCHG	2.16 1.91 1.61 1.31 1.03 .79 .59 .43 .32 .23
25.00 DISCHG	.16 .11 .08 .05 .03 .02 .01 .01 .00

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	532.01	(RUNOFF)
10.43	20.31	(RUNOFF)
11.61	18.53	(RUNOFF)
12.61	18.66	(RUNOFF)
14.11	18.74	(RUNOFF)
18.95	10.78	(RUNOFF)
20.64	9.58	(RUNOFF)
21.60	8.29	(RUNOFF)
23.53	7.97	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.35	122.66	(RUNOFF)
10.44	7.07	(RUNOFF)
11.72	6.06	(RUNOFF)
12.72	6.13	(RUNOFF)
14.24	6.05	(RUNOFF)
18.96	3.83	(RUNOFF)
23.59	2.68	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.56	108.02	5492.66
10.56	7.06	5490.28
12.90	5.93	5490.24
14.44	5.81	5490.23
19.07	3.82	5490.15
23.75	2.62	5490.10

OPERATION RUNOFF CROSS SECTION 26

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	280.18	(RUNOFF)
7.46	23.11	(RUNOFF)
10.44	9.84	(RUNOFF)
11.55	9.43	(RUNOFF)
12.55	9.55	(RUNOFF)
14.05	9.63	(RUNOFF)
18.95	5.29	(RUNOFF)
20.57	4.98	(RUNOFF)
23.49	4.06	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	311.29	5494.08
10.45	16.93	5490.56
11.57	14.71	5490.51
12.58	14.76	5490.51
14.10	14.43	5490.50
18.95	9.11	5490.36
20.62	7.40	5490.30
21.56	6.91	5490.28
23.51	6.54	5490.26

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .70 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
24.60 .70 5502.22

TIME(HRS)	DISCHG	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .72 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .02		
6.00	DISCHG	.04 .08 .13 .18 .21 .24 .27 .30 .32 .34		
7.00	DISCHG	.35 .36 .38 .39 .40 .40 .41 .42 .43 .43		
8.00	DISCHG	.44 .44 .45 .45 .46 .46 .47 .47 .47 .48		
9.00	DISCHG	.48 .48 .48 .49 .49 .49 .49 .50 .50 .50		
10.00	DISCHG	.51 .51 .51 .51 .52 .52 .52 .52 .53 .53		
11.00	DISCHG	.53 .53 .53 .54 .54 .54 .54 .54 .55 .55		
12.00	DISCHG	.55 .55 .55 .56 .56 .56 .56 .56 .57 .57		
13.00	DISCHG	.57 .57 .57 .57 .58 .58 .58 .58 .58 .58		
14.00	DISCHG	.59 .59 .59 .59 .59 .60 .60 .60 .60 .60		
15.00	DISCHG	.60 .61 .61 .61 .61 .61 .61 .61 .62 .62		
16.00	DISCHG	.62 .62 .62 .62 .62 .62 .63 .63 .63 .63		
17.00	DISCHG	.63 .63 .63 .64 .64 .64 .64 .64 .64 .64		
18.00	DISCHG	.64 .65 .65 .65 .65 .65 .65 .65 .66 .66		

FR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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19.00	DISCHG	.66 .66 .66 .66 .66 .66 .66 .67 .67 .67		
20.00	DISCHG	.67 .67 .67 .67 .67 .67 .67 .67 .68 .68		
21.00	DISCHG	.68 .68 .68 .68 .68 .68 .68 .68 .68 .69		
22.00	DISCHG	.69 .69 .69 .69 .69 .69 .69 .69 .69 .69		
23.00	DISCHG	.69 .70 .70 .70 .70 .70 .70 .70 .70 .70		
24.00	DISCHG	.70 .70 .70 .70 .70 .70 .70 .70 .70 .70		
25.00	DISCHG	.70 .70 .70 .70 .70 .70 .70 .70 .70 .70		
26.00	DISCHG	.70 .70 .70 .70 .70 .70 .70 .70 .70 .70		
27.00	DISCHG	.70 .70 .70 .70 .70 .70 .70 .70 .70 .70		
28.00	DISCHG	.70 .70 .70 .70 .70 .70 .70 .70 .70 .70		
29.00	DISCHG	.70 .70 .70 .70 .70 .70 .70 .70 .70 .70		

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

U *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .70 CFS, 99.20 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .69 CFS.

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
25.30 .69 5420.03

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	311.18	(RUNOFF)
10.44	12.26	(RUNOFF)
11.60	11.27	(RUNOFF)
12.60	11.37	(RUNOFF)
14.10	11.43	(RUNOFF)

18.95	6.55	(RUNOFF)
20.63	5.87	(RUNOFF)
21.59	5.05	(RUNOFF)
23.53	4.86	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
 PAGE 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	311.18	5424.59
10.45	12.72	5420.47
11.60	11.76	5420.45
12.60	11.88	5420.45
14.10	11.97	5420.45
18.95	7.18	5420.29
20.63	6.52	5420.26
21.59	5.71	5420.23
23.53	5.54	5420.22

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.39	257.70	5305.80
10.56	12.69	5300.70
11.78	11.16	5300.64
12.78	11.29	5300.65
14.29	11.30	5300.65
19.06	7.16	5300.43
23.68	5.38	5300.32

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.13	613.89	(RUNOFF)
10.45	18.91	(RUNOFF)
11.56	17.84	(RUNOFF)
12.56	17.95	(RUNOFF)
14.06	18.05	(RUNOFF)
18.92	9.89	(RUNOFF)
20.58	9.24	(RUNOFF)
21.55	7.73	(RUNOFF)
23.49	7.50	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW

JOB 1 PASS 3

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	765.76	5311.54
10.46	31.57	5301.41
11.60	28.09	5301.28
12.61	28.29	5301.29
14.12	28.25	5301.28
18.95	17.07	5300.87
20.64	14.78	5300.78
21.59	13.17	5300.72
23.53	12.63	5300.70

EXECUTIVE CONTROL OPERATION ENDATA

RECORD ID

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 58

TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 2.70 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 4 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	249.43	(RUNOFF)
10.45	12.18	(RUNOFF)
11.58	11.43	(RUNOFF)
12.57	11.64	(RUNOFF)
14.08	11.78	(RUNOFF)
18.95	6.72	(RUNOFF)
20.60	6.19	(RUNOFF)
21.57	5.26	(RUNOFF)
23.50	5.11	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	249.62	(RUNOFF)
10.46	12.04	(RUNOFF)
11.60	11.05	(RUNOFF)
12.60	11.20	(RUNOFF)
14.11	11.30	(RUNOFF)

18.95	6.58	(RUNOFF)
20.63	5.88	(RUNOFF)
21.60	5.09	(RUNOFF)
23.53	4.90	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	497.97	5687.18
10.46	24.22	5680.93
11.59	22.47	5680.87
12.59	22.83	5680.88
14.09	23.06	5680.89
18.95	13.31	5680.60
20.61	12.07	5680.56
21.58	10.35	5680.51
23.51	10.01	5680.50

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	68.36	(RUNOFF)
10.46	4.06	(RUNOFF)
11.61	3.72	(RUNOFF)
12.61	3.78	(RUNOFF)
14.12	3.83	(RUNOFF)
18.95	2.27	(RUNOFF)
23.53	1.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 3
 PAGE 53

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	565.32	5706.22
10.46	28.28	5700.86
11.59	26.19	5700.80
12.59	26.60	5700.81
14.10	26.89	5700.82
18.95	15.58	5700.54
20.62	14.09	5700.50
21.59	12.11	5700.45
23.52	11.70	5700.44

OPERATION REACH CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.58	358.48	5496.51
10.67	28.14	5491.19
11.91	23.80	5491.05

12.92	23.94	5491.05
14.44	23.52	5491.04
19.17	15.52	5490.78
21.00	12.33	5490.68
21.89	11.67	5490.65
23.80	10.89	5490.63

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.29	189.67	(RUNOFF)
10.39	7.23	(RUNOFF)
11.70	6.22	(RUNOFF)
12.70	6.18	(RUNOFF)
14.22	6.12	(RUNOFF)
18.87	3.74	(RUNOFF)
23.59	2.63	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
 PAGE 54

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.51	497.83	5497.98
10.48	35.29	5491.42
11.86	29.58	5491.24
12.87	29.68	5491.24
14.40	29.13	5491.22
18.98	19.23	5490.90
20.95	15.20	5490.77
21.84	14.38	5490.74
23.74	13.25	5490.71

OPERATION RUNOFF CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	1858.74	(RUNOFF)
10.38	41.31	(RUNOFF)
11.52	39.80	(RUNOFF)
12.52	39.94	(RUNOFF)
14.02	40.11	(RUNOFF)
18.88	21.08	(RUNOFF)
20.53	20.17	(RUNOFF)
21.51	16.58	(RUNOFF)
23.47	16.24	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	2017.48	5502.40

10.39	76.59	5491.23
11.56	66.65	5491.07
12.56	66.40	5491.06
14.08	64.62	5491.03
18.94	40.30	5490.65
20.60	32.59	5490.54
21.54	30.46	5490.51
23.49	28.74	5490.48

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 1010.2 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

1

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 3
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT	PAGE 55

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1964.36	5481.05
10.50	76.58	5462.35
11.67	66.32	5462.02
12.67	66.03	5462.01
14.19	64.16	5461.95
19.05	40.37	5461.24
20.71	32.38	5461.02
21.66	30.46	5460.96
23.60	28.59	5460.91

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	110.84	(RUNOFF)
10.45	4.92	(RUNOFF)
11.62	4.46	(RUNOFF)
12.61	4.52	(RUNOFF)
14.12	4.55	(RUNOFF)
18.95	2.65	(RUNOFF)
23.54	1.96	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	2074.55	5482.13
10.47	81.49	5462.51
11.66	70.75	5462.16
12.67	70.51	5462.16
14.18	68.63	5462.10
18.99	42.94	5461.31
20.71	34.70	5461.08
21.65	32.50	5461.02
23.60	30.53	5460.96

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 2.52 CFS.

PEAK TIME(HRS) 24.80 PEAK DISCHARGE(CFS) 2.52 PEAK ELEVATION(FEET) 5475.13

TIME(HRS) FIRST HYDROGRAPH POINT = .00 HOURS TIME INCREMENT = .10 HOURS DRAINAGE AREA = 3.52 SQ.MI.
 5.00 DISCHG .00 .00 .00 .00 .00 .00 .00 .00 .02 .08
 6.00 DISCHG .19 .35 .55 .74 .91 1.03 1.13 1.21 1.28 1.35

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 3
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT PAGE 56

7.00	DISCHG	1.40	1.44	1.48	1.51	1.54	1.57	1.60	1.62	1.65	1.67
8.00	DISCHG	1.69	1.70	1.72	1.74	1.75	1.77	1.78	1.79	1.80	1.81
9.00	DISCHG	1.82	1.83	1.84	1.85	1.86	1.87	1.87	1.88	1.89	1.90
10.00	DISCHG	1.91	1.91	1.92	1.93	1.94	1.95	1.95	1.96	1.97	1.98
11.00	DISCHG	1.98	1.99	1.99	2.00	2.01	2.01	2.02	2.03	2.03	2.04
12.00	DISCHG	2.05	2.05	2.06	2.06	2.07	2.07	2.08	2.09	2.09	2.10
13.00	DISCHG	2.11	2.11	2.12	2.12	2.13	2.13	2.14	2.14	2.14	2.15
14.00	DISCHG	2.16	2.16	2.17	2.18	2.18	2.19	2.19	2.20	2.20	2.21
15.00	DISCHG	2.21	2.22	2.22	2.23	2.23	2.23	2.24	2.24	2.25	2.25
16.00	DISCHG	2.26	2.26	2.26	2.27	2.27	2.28	2.28	2.28	2.29	2.29
17.00	DISCHG	2.30	2.30	2.30	2.31	2.31	2.32	2.32	2.32	2.33	2.33
18.00	DISCHG	2.34	2.34	2.34	2.35	2.35	2.36	2.36	2.37	2.37	2.37
19.00	DISCHG	2.38	2.38	2.39	2.39	2.39	2.40	2.40	2.40	2.41	2.41
20.00	DISCHG	2.41	2.41	2.41	2.42	2.42	2.42	2.43	2.43	2.43	2.43
21.00	DISCHG	2.44	2.44	2.44	2.45	2.45	2.45	2.46	2.46	2.46	2.46
22.00	DISCHG	2.47	2.47	2.47	2.47	2.48	2.48	2.48	2.48	2.49	2.49
23.00	DISCHG	2.49	2.49	2.50	2.50	2.50	2.50	2.51	2.51	2.51	2.52
24.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
25.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
26.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
27.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.51	2.51	2.51
28.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
29.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51

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

) *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 2.51 CFS, 99.52 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 2.52 CFS.

PEAK TIME(HRS) 25.30 PEAK DISCHARGE(CFS) 2.52 PEAK ELEVATION(FEET) 5420.08

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS) 6.18 PEAK DISCHARGE(CFS) 87.11 PEAK ELEVATION(FEET) (RUNOFF)
 10.45 3.60 (RUNOFF)

11.57	3.36	(RUNOFF)
12.57	3.42	(RUNOFF)
14.08	3.44	(RUNOFF)
18.93	1.94	(RUNOFF)
23.50	1.47	(RUNOFF)

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	87.11	5422.09
7.56	9.53	5420.29
10.46	5.47	5420.16
11.58	5.32	5420.16
12.58	5.44	5420.16
14.08	5.56	5420.17
18.96	4.28	5420.13
23.51	3.95	5420.12

OPERATION REACH CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.39	64.19	5361.54
10.60	5.44	5360.16
12.78	5.17	5360.15
14.29	5.25	5360.16
23.68	3.88	5360.12

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	211.14	(RUNOFF)
10.46	9.01	(RUNOFF)
11.61	8.21	(RUNOFF)
12.61	8.31	(RUNOFF)
14.11	8.36	(RUNOFF)
18.89	4.83	(RUNOFF)
20.64	4.31	(RUNOFF)
23.53	3.58	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	261.48	5363.61
10.47	14.43	5360.40
11.64	13.11	5360.37
12.64	13.30	5360.37
14.15	13.40	5360.38
18.95	9.10	5360.27

20.68	8.22	5360.25
23.56	7.43	5360.22

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	260.36	5362.54
10.47	14.43	5360.16
11.64	13.11	5360.15
12.64	13.30	5360.15
14.15	13.40	5360.15
18.95	9.10	5360.10
20.69	8.21	5360.09
23.56	7.42	5360.08

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.14 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	2.74	16.23	55.75
6.00	DISCHG	125.03	202.15	251.57	257.35	218.98	170.22	127.67	103.74	79.35	66.09
7.00	DISCHG	52.43	46.38	39.76	37.40	34.14	33.32	31.55	31.08	29.55	28.78
8.00	DISCHG	27.49	26.79	25.17	23.20	20.68	18.72	17.08	16.11	15.33	14.90
9.00	DISCHG	14.55	14.40	14.25	14.22	14.16	14.18	14.17	14.20	14.21	14.25
10.00	DISCHG	14.27	14.31	14.33	14.37	14.39	14.42	14.30	13.82	12.86	11.71
11.00	DISCHG	10.68	10.07	10.06	10.69	11.63	12.50	13.06	13.01	12.38	11.45
12.00	DISCHG	10.59	10.05	10.13	10.79	11.75	12.66	13.24	13.19	12.55	11.63
13.00	DISCHG	10.73	10.04	9.57	9.25	9.03	8.89	8.95	9.43	10.39	11.56
14.00	DISCHG	12.66	13.31	13.34	12.73	11.79	10.89	10.21	9.75	9.42	9.21
15.00	DISCHG	9.06	8.97	8.90	8.87	8.84	8.83	8.82	8.83	8.83	8.84
16.00	DISCHG	8.85	8.85	8.86	8.87	8.88	8.89	8.90	8.90	8.91	8.92
17.00	DISCHG	8.93	8.94	8.95	8.95	8.96	8.97	8.98	8.99	9.00	9.00
18.00	DISCHG	9.01	9.02	9.03	9.04	9.05	9.06	9.06	9.07	9.08	9.09
19.00	DISCHG	9.09	9.04	8.82	8.41	7.93	7.48	7.12	6.78	6.42	6.06
20.00	DISCHG	5.78	5.65	5.85	6.37	7.05	7.69	8.10	8.21	8.03	7.70
21.00	DISCHG	7.35	7.13	7.06	7.15	7.32	7.48	7.59	7.57	7.42	7.22
22.00	DISCHG	7.03	6.88	6.78	6.71	6.67	6.64	6.62	6.61	6.60	6.60
23.00	DISCHG	6.60	6.63	6.74	6.93	7.16	7.36	7.40	7.07	6.35	5.45
24.00	DISCHG	4.61	3.99	3.55	3.22	2.99	2.83	2.72	2.65	2.60	2.56
25.00	DISCHG	2.54	2.53	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
26.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
27.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.51
28.00	DISCHG	2.52	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
29.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51

OPERATION REACH CROSS SECTION 30

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.54	226.65	5313.00
10.69	14.39	5310.49
11.92	12.69	5310.45
12.92	12.86	5310.46
14.44	12.90	5310.46
19.17	9.08	5310.36
23.80	7.27	5310.29

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	91.54	(RUNOFF)
10.45	4.70	(RUNOFF)
11.61	4.31	(RUNOFF)
12.61	4.37	(RUNOFF)
14.12	4.41	(RUNOFF)
18.95	2.59	(RUNOFF)
23.54	1.92	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	272.46	5313.25
10.50	19.03	5310.58
11.82	16.23	5310.52
12.82	16.43	5310.53
14.35	16.43	5310.53
18.98	11.65	5310.43
21.79	9.36	5310.37
23.64	8.89	5310.36

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	56.05	(RUNOFF)
7.49	5.99	(RUNOFF)
10.46	2.67	(RUNOFF)
11.54	2.58	(RUNOFF)
12.54	2.62	(RUNOFF)
14.04	2.67	(RUNOFF)
23.48	1.16	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
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6.47	290.11	5393.63
10.47	21.69	5390.53
11.73	18.25	5390.46
12.73	18.47	5390.47
14.27	18.38	5390.47
18.96	13.15	5390.36
21.68	10.45	5390.31
23.58	9.98	5390.30

OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.57	279.45	5313.57
10.49	21.68	5310.34
11.75	18.24	5310.29
12.76	18.44	5310.29
14.30	18.38	5310.29
18.97	13.14	5310.21
21.71	10.45	5310.17
23.60	9.96	5310.16

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.59 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.26	3.70	21.71
6.00	DISCHG	67.41	131.69	169.38	216.15	253.13	275.16	278.28	261.59	230.70	195.40
7.00	DISCHG	162.18	133.56	94.86	79.31	69.68	62.27	57.27	53.37	50.41	48.02
8.00	DISCHG	46.17	44.38	42.26	39.64	36.95	34.28	31.63	29.14	27.02	25.33
9.00	DISCHG	24.07	23.15	22.51	22.08	21.80	21.62	21.52	21.47	21.45	21.46
10.00	DISCHG	21.48	21.52	21.56	21.60	21.64	21.68	21.62	21.20	20.41	19.45
11.00	DISCHG	18.37	17.30	16.60	16.42	16.62	17.13	17.78	18.19	18.19	17.87
12.00	DISCHG	17.29	16.62	16.22	16.24	16.60	17.22	17.93	18.39	18.42	18.11
13.00	DISCHG	17.52	16.73	15.86	15.02	14.33	13.79	13.52	13.70	14.36	15.30
14.00	DISCHG	16.38	17.44	18.17	18.38	18.18	17.69	16.94	16.07	15.25	14.57
15.00	DISCHG	14.04	13.64	13.35	13.15	13.01	12.92	12.86	12.83	12.81	12.80
16.00	DISCHG	12.80	12.80	12.81	12.82	12.83	12.84	12.86	12.87	12.88	12.89
17.00	DISCHG	12.90	12.92	12.93	12.94	12.95	12.96	12.97	12.99	13.00	13.01
18.00	DISCHG	13.02	13.03	13.05	13.06	13.07	13.08	13.09	13.11	13.12	13.13
19.00	DISCHG	13.14	13.10	12.91	12.55	12.12	11.64	11.11	10.51	9.88	9.30
20.00	DISCHG	8.79	8.41	8.32	8.55	8.98	9.53	10.12	10.60	10.84	10.90
21.00	DISCHG	10.80	10.60	10.41	10.29	10.27	10.31	10.40	10.45	10.41	10.32
22.00	DISCHG	10.18	10.00	9.80	9.62	9.47	9.35	9.27	9.21	9.17	9.14
23.00	DISCHG	9.13	9.14	9.23	9.39	9.60	9.82	9.96	9.80	9.30	8.61
24.00	DISCHG	7.80	6.89	5.97	5.13	4.44	3.90	3.50	3.20	2.98	2.83
25.00	DISCHG	2.72	2.65	2.60	2.56	2.54	2.53	2.53	2.52	2.52	2.52
26.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
27.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.51	2.52
28.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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29.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
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OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.86	229.78	5252.08
10.57	21.67	5250.35
11.95	17.87	5250.30
13.00	17.86	5250.30
14.59	17.42	5250.29
19.13	13.11	5250.24
21.87	10.40	5250.21
23.78	9.67	5250.19

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.58	26.82	(RUNOFF)
23.66	1.07	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.83	252.46	5252.19
11.92	20.15	5250.33
12.97	20.12	5250.33
14.56	19.61	5250.32
19.09	14.67	5250.26
21.86	11.56	5250.22
23.76	10.72	5250.21

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.87	251.40	5282.27
11.94	20.14	5280.30
12.98	20.12	5280.30
14.57	19.61	5280.29
19.10	14.67	5280.22
21.87	11.56	5280.17
23.78	10.72	5280.16

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	4.78 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00	.01	.26	1.98	
6.00	DISCHG	9.12 28.16 61.94 97.29 138.00 177.48 211.68 231.99 248.49 250.98				

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	PASS 3
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT		PAGE 62

7.00	DISCHG	242.32	225.99	204.18	175.55	152.33	131.47	114.70	100.79	89.67	80.64
8.00	DISCHG	73.40	67.54	62.29	58.44	54.49	50.95	47.42	44.12	40.92	37.98
9.00	DISCHG	35.31	33.01	31.07	29.48	28.21	27.20	26.43	25.83	25.39	25.06
10.00	DISCHG	24.83	24.67	24.56	24.49	24.46	24.45	24.44	24.41	24.25	23.88
11.00	DISCHG	23.28	22.50	21.62	20.77	20.12	19.74	19.64	19.77	19.99	20.13
12.00	DISCHG	20.11	19.90	19.54	19.16	18.90	18.86	19.03	19.38	19.77	20.04
13.00	DISCHG	20.12	19.97	19.60	19.06	18.41	17.73	17.09	16.55	16.24	16.23
14.00	DISCHG	16.55	17.12	17.86	18.61	19.20	19.54	19.60	19.40	18.98	18.43

15.00	DISCHG	17.82	17.22	16.67	16.18	15.77	15.44	15.17	14.95	14.79	14.66
16.00	DISCHG	14.57	14.50	14.45	14.42	14.40	14.39	14.38	14.38	14.39	14.39
17.00	DISCHG	14.40	14.41	14.42	14.43	14.45	14.46	14.47	14.48	14.50	14.51
18.00	DISCHG	14.52	14.54	14.55	14.56	14.58	14.59	14.61	14.62	14.63	14.65
19.00	DISCHG	14.66	14.67	14.66	14.59	14.42	14.15	13.80	13.37	12.88	12.32
20.00	DISCHG	11.74	11.16	10.64	10.23	10.02	10.02	10.20	10.52	10.89	11.23
21.00	DISCHG	11.48	11.62	11.66	11.62	11.56	11.52	11.50	11.52	11.55	11.56
22.00	DISCHG	11.53	11.46	11.34	11.20	11.04	10.88	10.73	10.60	10.48	10.39
23.00	DISCHG	10.32	10.26	10.22	10.23	10.28	10.39	10.53	10.67	10.71	10.58
24.00	DISCHG	10.24	9.73	9.07	8.31	7.49	6.69	5.96	5.30	4.74	4.27
25.00	DISCHG	3.88	3.57	3.32	3.12	2.97	2.85	2.77	2.70	2.65	2.61
26.00	DISCHG	2.59	2.57	2.55	2.54	2.53	2.53	2.52	2.52	2.52	2.52
27.00	DISCHG	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.51
28.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51
29.00	DISCHG	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51	2.51

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	85.75	(RUNOFF)
10.45	4.85	(RUNOFF)
11.62	4.42	(RUNOFF)
12.62	4.48	(RUNOFF)
14.13	4.53	(RUNOFF)
18.92	2.69	(RUNOFF)
23.55	1.99	(RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.50	61.25	5250.49
10.58	4.83	5250.05
12.84	4.13	5250.04
14.36	4.09	5250.04
19.06	2.68	5250.03
23.71	1.89	5250.02

OPERATION RESVOR STRUCTURE 18

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.77	47.27	5324.30
10.65	4.82	5320.54
12.95	4.04	5320.45
14.49	3.99	5320.44
19.11	2.68	5320.30
23.80	1.85	5320.21

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	.30 SQ.MI.
5.00	DISCHG	.00	.00	.00	.00	.02
		.00	.00	.00	.00	.28

6.00	DISCHG	1.63	5.93	14.93	23.82	33.10	41.75	45.95	47.05	47.25	46.62
7.00	DISCHG	45.33	40.93	35.88	31.28	27.26	23.85	21.03	18.75	16.13	14.02
8.00	DISCHG	12.73	11.85	11.19	10.62	10.05	9.42	8.73	8.03	7.36	6.78
9.00	DISCHG	6.29	5.90	5.59	5.36	5.18	5.05	4.96	4.90	4.86	4.83
10.00	DISCHG	4.81	4.80	4.80	4.80	4.81	4.81	4.82	4.82	4.79	4.70
11.00	DISCHG	4.53	4.29	4.01	3.76	3.60	3.56	3.63	3.77	3.92	4.01
12.00	DISCHG	4.00	3.89	3.72	3.56	3.46	3.47	3.58	3.75	3.93	4.03
13.00	DISCHG	4.03	3.93	3.76	3.56	3.36	3.18	3.04	2.92	2.87	2.90
14.00	DISCHG	3.03	3.26	3.53	3.78	3.94	3.99	3.92	3.77	3.58	3.39
15.00	DISCHG	3.22	3.08	2.96	2.87	2.80	2.74	2.70	2.68	2.66	2.64
16.00	DISCHG	2.63	2.63	2.62	2.62	2.62	2.62	2.62	2.62	2.62	2.63
17.00	DISCHG	2.63	2.63	2.63	2.63	2.64	2.64	2.64	2.64	2.65	2.65
18.00	DISCHG	2.65	2.65	2.66	2.66	2.66	2.66	2.67	2.67	2.67	2.67
19.00	DISCHG	2.68	2.68	2.68	2.66	2.62	2.54	2.43	2.31	2.17	2.03
20.00	DISCHG	1.89	1.75	1.63	1.54	1.51	1.55	1.65	1.80	1.94	2.04
21.00	DISCHG	2.10	2.10	2.06	2.01	1.97	1.94	1.95	1.97	1.99	2.00
22.00	DISCHG	1.99	1.96	1.92	1.87	1.83	1.79	1.76	1.73	1.71	1.69
23.00	DISCHG	1.68	1.67	1.67	1.67	1.69	1.72	1.77	1.82	1.85	1.82
24.00	DISCHG	1.71	1.53	1.32	1.09	.87	.69	.53	.40	.30	.22
25.00	DISCHG	.16	.12	.08	.06	.04	.03	.02	.01	.01	.00

OPERATION RUNOFF CROSS SECTION 14

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	394.90	(RUNOFF)
10.45	16.32	(RUNOFF)
11.61	14.92	(RUNOFF)
12.61	15.05	(RUNOFF)
14.11	15.14	(RUNOFF)
18.95	8.75	(RUNOFF)
20.64	7.79	(RUNOFF)
21.60	6.74	(RUNOFF)
23.53	6.49	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

1

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 3
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT	PAGE 64

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.36	85.56	(RUNOFF)
10.45	5.54	(RUNOFF)
12.72	4.82	(RUNOFF)
14.24	4.77	(RUNOFF)
18.96	3.04	(RUNOFF)
23.59	2.14	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.59	74.40	5491.93
10.57	5.53	5490.22

12.91	4.64	5490.19
14.45	4.56	5490.18
19.08	3.03	5490.12
23.76	2.08	5490.08

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	202.08	(RUNOFF)
7.47	18.04	(RUNOFF)
10.45	7.80	(RUNOFF)
11.55	7.46	(RUNOFF)
12.55	7.57	(RUNOFF)
14.05	7.65	(RUNOFF)
18.95	4.23	(RUNOFF)
20.57	3.98	(RUNOFF)
23.49	3.26	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	221.46	5493.45
10.45	13.32	5490.47
11.57	11.61	5490.44
12.58	11.66	5490.44
14.09	11.41	5490.43
18.95	7.26	5490.29
21.56	5.52	5490.22
23.51	5.22	5490.21

OPERATION RESVOR STRUCTURE 94

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .52 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.60	.52	5501.14

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .72 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .01		
6.00 DISCHG	.03 .05 .09 .12 .15 .17 .19 .21 .22 .24		
7.00 DISCHG	.25 .26 .27 .27 .28 .29 .29 .30 .30 .31		
8.00 DISCHG	.31 .32 .32 .33 .33 .33 .33 .34 .34 .34		
9.00 DISCHG	.34 .35 .35 .35 .35 .36 .36 .36 .36 .36		
10.00 DISCHG	.37 .37 .37 .37 .37 .38 .38 .38 .38 .38		
11.00 DISCHG	.39 .39 .39 .39 .39 .39 .39 .40 .40 .40		
12.00 DISCHG	.40 .40 .40 .41 .41 .41 .41 .41 .41 .42		
13.00 DISCHG	.42 .42 .42 .42 .42 .42 .42 .43 .43 .43		
14.00 DISCHG	.43 .43 .43 .44 .44 .44 .44 .44 .44 .44		
15.00 DISCHG	.44 .45 .45 .45 .45 .45 .45 .45 .45 .45		

16.00	DISCHG	.46	.46	.46	.46	.46	.46	.46	.46	.46	.46
17.00	DISCHG	.47	.47	.47	.47	.47	.47	.47	.47	.47	.48
18.00	DISCHG	.48	.48	.48	.48	.48	.48	.48	.48	.49	.49
19.00	DISCHG	.49	.49	.49	.49	.49	.49	.49	.49	.49	.49
20.00	DISCHG	.50	.50	.50	.50	.50	.50	.50	.50	.50	.50
21.00	DISCHG	.50	.50	.50	.51	.51	.51	.51	.51	.51	.51
22.00	DISCHG	.51	.51	.51	.51	.51	.51	.51	.52	.52	.52
23.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
24.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
25.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
26.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
27.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
28.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52
29.00	DISCHG	.52	.52	.52	.52	.52	.52	.52	.52	.52	.52

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .52 CFS, 99.21 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .51 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.40	.51	5420.02

OPERATION RUNOFF CROSS SECTION 24

1

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 3
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TYT	PAGE 66

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	227.20	(RUNOFF)
10.45	9.78	(RUNOFF)
11.60	9.00	(RUNOFF)
12.60	9.09	(RUNOFF)
14.10	9.16	(RUNOFF)
18.95	5.28	(RUNOFF)
20.63	4.73	(RUNOFF)
23.53	3.93	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	227.20	5423.92
10.45	10.09	5420.40
11.60	9.34	5420.37
12.60	9.45	5420.38
14.10	9.55	5420.38
18.95	5.73	5420.23
20.63	5.21	5420.21
23.53	4.43	5420.18

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	183.32	5305.00
10.57	10.05	5300.60
11.78	8.82	5300.53
12.79	8.93	5300.54
14.30	8.95	5300.54
19.06	5.72	5300.34
23.68	4.28	5300.26

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.14	467.83	(RUNOFF)
10.45	15.39	(RUNOFF)
11.56	14.54	(RUNOFF)
12.56	14.65	(RUNOFF)
14.06	14.76	(RUNOFF)
18.94	8.12	(RUNOFF)
20.58	7.59	(RUNOFF)
21.55	6.36	(RUNOFF)
23.49	6.17	(RUNOFF)

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 3
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OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	569.43	5309.22
10.46	25.42	5301.18
11.60	22.62	5301.07
12.60	22.81	5301.08
14.11	22.79	5301.08
18.95	13.85	5300.74
20.64	11.96	5300.67
21.59	10.69	5300.63
23.53	10.25	5300.61

EXECUTIVE CONTROL OPERATION ENDCMP

COMPUTATIONS COMPLETED FOR PASS 3 RECORD ID

EXECUTIVE CONTROL OPERATION INCREM

MAIN TIME INCREMENT = .10 HOURS RECORD ID

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 58

TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 2.30 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 5 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	151.83	(RUNOFF)
10.46	8.79	(RUNOFF)
11.58	8.28	(RUNOFF)
12.57	8.46	(RUNOFF)
14.08	8.60	(RUNOFF)
18.95	4.96	(RUNOFF)
20.60	4.57	(RUNOFF)
23.50	3.79	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
PAGE 68

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	158.30	(RUNOFF)
10.46	8.86	(RUNOFF)
11.60	8.16	(RUNOFF)
12.60	8.29	(RUNOFF)
14.11	8.39	(RUNOFF)
18.95	4.93	(RUNOFF)
20.63	4.42	(RUNOFF)
23.53	3.69	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	309.53	5685.44
10.46	17.64	5680.73
11.59	16.43	5680.69
12.59	16.74	5680.70
14.09	16.98	5680.71
18.95	9.89	5680.49
20.62	8.98	5680.45
21.58	7.71	5680.39
23.52	7.48	5680.37

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	39.20	(RUNOFF)
10.47	2.88	(RUNOFF)
12.61	2.70	(RUNOFF)

14.12	2.75	(RUNOFF)
23.53	1.24	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	348.24	5704.56
10.46	20.52	5700.66
11.59	19.08	5700.63
12.59	19.44	5700.64
14.10	19.73	5700.64
18.95	11.54	5700.44
20.62	10.45	5700.41
21.59	8.99	5700.36
23.52	8.71	5700.35

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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OPERATION REACH CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.61	207.24	5494.93
10.68	20.42	5490.94
11.91	17.25	5490.84
12.92	17.34	5490.84
14.46	17.00	5490.83
19.17	11.48	5490.65
21.89	8.65	5490.52
23.80	8.05	5490.48

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	142.84	(RUNOFF)
10.40	5.83	(RUNOFF)
11.70	5.02	(RUNOFF)
12.70	5.00	(RUNOFF)
14.22	4.96	(RUNOFF)
18.87	3.04	(RUNOFF)
23.59	2.14	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.51	309.21	5496.00
10.45	26.20	5491.13
11.85	21.92	5490.99
12.87	21.97	5490.99
14.40	21.53	5490.98
18.99	14.50	5490.75

21.84	10.86	5490.63
23.73	9.98	5490.60

OPERATION RUNOFF CROSS SECTION 52
1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 4
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.07	1467.49	(RUNOFF)
10.38	33.99	(RUNOFF)
11.52	32.78	(RUNOFF)
12.52	32.92	(RUNOFF)
14.02	33.10	(RUNOFF)
18.88	17.43	(RUNOFF)
20.53	16.68	(RUNOFF)
21.51	13.72	(RUNOFF)
23.47	13.45	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	1575.32	5499.84
10.38	60.19	5490.96
11.55	52.97	5490.85
12.56	52.74	5490.84
14.07	51.42	5490.82
18.95	31.99	5490.53
20.59	26.11	5490.44
21.53	24.24	5490.41
23.49	22.92	5490.39

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 570.1 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1520.90	5476.71
10.48	60.19	5461.83
11.66	52.65	5461.58
12.67	52.38	5461.58
14.18	50.98	5461.53
19.05	31.97	5461.00
20.71	25.91	5460.84
21.65	24.22	5460.79
23.60	22.77	5460.75

OPERATION RUNOFF CROSS SECTION 38
1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	73.85	(RUNOFF)
10.45	3.70	(RUNOFF)
11.62	3.37	(RUNOFF)
12.61	3.42	(RUNOFF)
14.12	3.45	(RUNOFF)
18.95	2.03	(RUNOFF)
23.54	1.50	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	1594.04	5477.42
10.46	63.89	5461.94
11.66	56.00	5461.69
12.67	55.78	5461.69
14.18	54.38	5461.64
18.99	33.94	5461.06
20.70	27.68	5460.89
21.65	25.78	5460.83
23.59	24.26	5460.79

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.90 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.90	1.90	5471.40

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	3.52 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .01 .05				
6.00	DISCHG	.13 .25 .40 .55 .68 .77 .84 .90 .95 .99				
7.00	DISCHG	1.03 1.06 1.08 1.11 1.13 1.15 1.17 1.19 1.21 1.23				
8.00	DISCHG	1.24 1.26 1.27 1.28 1.29 1.31 1.31 1.32 1.33 1.34				
9.00	DISCHG	1.35 1.35 1.36 1.37 1.38 1.38 1.39 1.39 1.40 1.41				
10.00	DISCHG	1.41 1.42 1.43 1.43 1.44 1.45 1.45 1.46 1.46 1.47				
11.00	DISCHG	1.47 1.48 1.48 1.49 1.49 1.50 1.50 1.51 1.51 1.52				
12.00	DISCHG	1.52 1.53 1.53 1.54 1.54 1.55 1.55 1.56 1.56 1.57				
13.00	DISCHG	1.57 1.58 1.58 1.58 1.59 1.59 1.59 1.60 1.60 1.61				
14.00	DISCHG	1.61 1.62 1.62 1.63 1.63 1.64 1.64 1.64 1.65 1.65				
15.00	DISCHG	1.65 1.66 1.66 1.67 1.67 1.67 1.68 1.68 1.68 1.69				
16.00	DISCHG	1.69 1.69 1.69 1.70 1.70 1.70 1.71 1.71 1.71 1.72				
17.00	DISCHG	1.72 1.72 1.73 1.73 1.73 1.74 1.74 1.74 1.75 1.75				
18.00	DISCHG	1.75 1.76 1.76 1.76 1.77 1.77 1.77 1.78 1.78 1.78				
19.00	DISCHG	1.79 1.79 1.79 1.79 1.80 1.80 1.80 1.81 1.81 1.81				
20.00	DISCHG	1.81 1.81 1.81 1.82 1.82 1.82 1.82 1.83 1.83 1.83				

21.00	DISCHG	1.83	1.84	1.84	1.84	1.84	1.84	1.85	1.85	1.85	1.85
22.00	DISCHG	1.86	1.86	1.86	1.86	1.86	1.87	1.87	1.87	1.87	1.87
23.00	DISCHG	1.88	1.88	1.88	1.88	1.88	1.89	1.89	1.89	1.89	1.89
24.00	DISCHG	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
25.00	DISCHG	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
26.00	DISCHG	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
27.00	DISCHG	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.89	1.89
28.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
29.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89

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

0 *** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 1.89 CFS, 99.53 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.89 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.40	1.89	5420.06

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	57.65	(RUNOFF)
10.45	2.69	(RUNOFF)
12.57	2.57	(RUNOFF)
14.08	2.60	(RUNOFF)
23.50	1.12	(RUNOFF)

OPERATION ADDEVD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	57.65	5421.38
7.56	6.94	5420.21
10.47	4.07	5420.12
12.58	4.07	5420.12
14.08	4.17	5420.13
23.51	2.98	5420.09

OPERATION REACH CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.52	40.17	5360.98
23.78	2.92	5360.09

1

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	142.70	(RUNOFF)
10.46	6.83	(RUNOFF)
11.61	6.24	(RUNOFF)
12.61	6.33	(RUNOFF)
14.11	6.38	(RUNOFF)
18.90	3.71	(RUNOFF)
23.53	2.76	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	160.25	5362.85
10.47	10.84	5360.32
11.64	9.72	5360.29
12.64	9.87	5360.30
14.16	9.94	5360.30
18.95	6.92	5360.21
23.56	5.61	5360.17

OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	160.27	5361.78
10.47	10.83	5360.12
11.65	9.72	5360.11
12.65	9.87	5360.11
14.17	9.93	5360.11
18.95	6.92	5360.08
23.56	5.61	5360.06

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = 4.14 SQ.MI.
5.00 DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00	.94 7.08 28.81	
6.00 DISCHG	70.49 120.72 154.49 159.34 141.52 115.92 94.23 76.70 62.33 51.01		
7.00 DISCHG	42.45 36.28 32.02 28.93 26.90 25.37 24.31 23.35 22.48 21.60		
8.00 DISCHG	20.87 20.12 19.06 17.53 15.89 14.41 13.26 12.41 11.81 11.37		
9.00 DISCHG	11.08 10.88 10.77 10.69 10.65 10.63 10.63 10.64 10.66 10.68		
10.00 DISCHG	10.70 10.73 10.75 10.78 10.80 10.83 10.75 10.40 9.74 8.97		
11.00 DISCHG	8.25 7.80 7.75 8.13 8.72 9.29 9.68 9.67 9.27 8.69		
12.00 DISCHG	8.12 7.74 7.78 8.19 8.80 9.41 9.82 9.81 9.42 8.84		
13.00 DISCHG	8.24 7.76 7.39 7.13 6.93 6.81 6.83 7.15 7.80 8.60		
14.00 DISCHG	9.36 9.84 9.91 9.55 8.96 8.38 7.90 7.54 7.27 7.09		
15.00 DISCHG	6.95 6.86 6.79 6.75 6.72 6.71 6.70 6.70 6.70 6.70		

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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16.00 DISCHG	6.71 6.71 6.72 6.73 6.73 6.74 6.75 6.76 6.76 6.77
17.00 DISCHG	6.78 6.78 6.79 6.80 6.81 6.81 6.82 6.83 6.84 6.84
18.00 DISCHG	6.85 6.86 6.86 6.87 6.88 6.89 6.89 6.90 6.91 6.91
19.00 DISCHG	6.92 6.88 6.72 6.44 6.10 5.79 5.52 5.25 4.97 4.70

20.00	DISCHG	4.48	4.38	4.50	4.84	5.29	5.73	6.04	6.14	6.05	5.85
21.00	DISCHG	5.63	5.48	5.42	5.47	5.57	5.68	5.75	5.74	5.65	5.51
22.00	DISCHG	5.38	5.27	5.20	5.14	5.10	5.07	5.05	5.04	5.04	5.03
23.00	DISCHG	5.03	5.05	5.13	5.26	5.42	5.56	5.59	5.36	4.87	4.26
24.00	DISCHG	3.67	3.20	2.85	2.58	2.37	2.22	2.12	2.04	1.99	1.96
25.00	DISCHG	1.93	1.91	1.91	1.90	1.90	1.90	1.89	1.90	1.89	1.90
26.00	DISCHG	1.89	1.90	1.89	1.90	1.89	1.90	1.89	1.90	1.89	1.90
27.00	DISCHG	1.89	1.90	1.89	1.90	1.89	1.90	1.89	1.90	1.89	1.90
28.00	DISCHG	1.89	1.90	1.89	1.90	1.89	1.90	1.89	1.89	1.89	1.89
29.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89

OPERATION REACH CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	136.14	5312.50
10.60	10.80	5310.42
11.83	9.41	5310.38
12.84	9.53	5310.38
14.36	9.52	5310.38
19.08	6.91	5310.28
23.71	5.48	5310.22

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	56.66	(RUNOFF)
10.45	3.42	(RUNOFF)
11.61	3.15	(RUNOFF)
12.61	3.20	(RUNOFF)
14.12	3.25	(RUNOFF)
18.95	1.92	(RUNOFF)
23.54	1.44	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 30

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	175.42	5312.71
10.51	14.19	5310.48
11.74	12.26	5310.45
12.74	12.43	5310.45
14.27	12.39	5310.45
18.98	8.82	5310.35
23.61	6.83	5310.27

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.17	31.88	(RUNOFF)

(RUNOFF)

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.37	190.74	5392.94
10.48	16.07	5390.42
11.68	13.87	5390.38
12.68	14.05	5390.38
14.21	13.99	5390.38
18.97	9.90	5390.30
21.65	7.96	5390.24
23.57	7.64	5390.23

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.48	182.96	5312.58
10.50	16.06	5310.25
11.70	13.86	5310.22
12.71	14.03	5310.22
14.24	13.98	5310.22
18.98	9.90	5310.16
21.68	7.95	5310.13
23.59	7.61	5310.12

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.59 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.03	1.26	10.50
6.00	DISCHG	40.71	94.48	137.78	161.87	179.45	182.61	173.60	157.32	137.93	110.69
7.00	DISCHG	84.78	74.31	62.82	55.13	49.11	44.79	41.56	39.01	36.88	35.10
8.00	DISCHG	33.63	32.31	30.76	28.76	26.55	24.39	22.45	20.79	19.45	18.40
9.00	DISCHG	17.61	17.02	16.60	16.31	16.11	15.99	15.92	15.88	15.87	15.87

JOB 1 PASS 4
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[illegible]

28.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
29.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.93	143.85	5251.70
12.00	13.44	5250.24
13.05	13.38	5250.24
14.63	13.00	5250.24
19.25	9.87	5250.20
23.88	7.34	5250.15

OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.61	15.11	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.90	155.92	5251.75
11.97	15.03	5250.26
13.02	14.96	5250.26
14.60	14.53	5250.26
19.16	10.98	5250.21
23.85	8.07	5250.16

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 4
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALF 3 DET & STR UPGRD : P3S2_OUT.TXT	PAGE 77

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.92	155.85	5281.62
11.99	15.03	5280.22
13.03	14.96	5280.22
14.61	14.53	5280.22
19.17	10.98	5280.16
23.86	8.07	5280.12

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	4.78 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .05 .41				
6.00	DISCHG	1.73 5.85 17.08 39.52 68.40 93.77 119.85 138.96 151.30 155.73				
7.00	DISCHG	153.78 145.72 132.84 119.58 107.21 95.49 85.28 76.37 68.87 62.05				
8.00	DISCHG	56.91 52.39 48.69 45.45 42.61 39.89 37.24 34.66 32.18 29.88				
9.00	DISCHG	27.78 25.93 24.34 22.99 21.88 20.97 20.23 19.65 19.20 18.85				
10.00	DISCHG	18.58 18.39 18.24 18.15 18.08 18.05 18.02 18.00 17.95 17.82				
11.00	DISCHG	17.51 17.04 16.43 15.78 15.19 14.79 14.61 14.64 14.80 14.97				
12.00	DISCHG	15.03 14.92 14.68 14.35 14.06 13.92 13.96 14.18 14.50 14.79				
13.00	DISCHG	14.95 14.91 14.70 14.36 13.93 13.47 13.02 12.62 12.29 12.12				

14.00	DISCHG	12.18	12.47	12.94	13.51	14.03	14.39	14.53	14.45	14.22	13.88
15.00	DISCHG	13.49	13.09	12.71	12.35	12.04	11.77	11.54	11.35	11.20	11.08
16.00	DISCHG	10.99	10.91	10.86	10.82	10.79	10.77	10.76	10.75	10.75	10.75
17.00	DISCHG	10.76	10.76	10.77	10.78	10.79	10.80	10.81	10.82	10.83	10.84
18.00	DISCHG	10.85	10.86	10.88	10.89	10.90	10.91	10.92	10.93	10.95	10.96
19.00	DISCHG	10.97	10.98	10.98	10.97	10.91	10.77	10.55	10.26	9.93	9.56
20.00	DISCHG	9.16	8.75	8.34	7.98	7.71	7.59	7.63	7.81	8.07	8.34
21.00	DISCHG	8.55	8.68	8.72	8.70	8.65	8.61	8.60	8.62	8.66	8.69
22.00	DISCHG	8.69	8.66	8.59	8.49	8.38	8.26	8.16	8.06	7.97	7.89
23.00	DISCHG	7.82	7.77	7.73	7.71	7.72	7.77	7.85	7.95	8.05	8.06
24.00	DISCHG	7.92	7.62	7.18	6.65	6.07	5.50	4.95	4.45	4.00	3.61
25.00	DISCHG	3.27	3.00	2.77	2.58	2.43	2.30	2.21	2.14	2.08	2.03
26.00	DISCHG	2.00	1.97	1.95	1.94	1.92	1.92	1.91	1.91	1.90	1.90
27.00	DISCHG	1.90	1.90	1.90	1.89	1.89	1.89	1.89	1.89	1.89	1.89
28.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
29.00	DISCHG	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.26	50.68	(RUNOFF)
10.46	3.49	(RUNOFF)
12.62	3.25	(RUNOFF)
14.13	3.30	(RUNOFF)
18.93	1.97	(RUNOFF)
23.55	1.47	(RUNOFF)

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.75	33.76	5250.28
23.92	1.38	5250.01

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.98	28.84	5322.80
24.01	1.35	5320.15

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = .30 SQ.MI.		
6.00	DISCHG	.00	.07	.50	2.22	6.37	13.01	19.49	23.49	26.70	28.48
7.00	DISCHG	28.81	28.02	26.45	24.43	22.23	20.03	17.95	14.79	12.79	11.44
8.00	DISCHG	10.47	9.72	9.12	8.62	8.18	7.78	7.38	6.94	6.46	5.97
9.00	DISCHG	5.51	5.08	4.72	4.42	4.18	3.99	3.84	3.73	3.64	3.58
10.00	DISCHG	3.53	3.50	3.48	3.47	3.46	3.46	3.46	3.46	3.46	3.46
11.00	DISCHG	3.45	3.39	3.29	3.13	2.95	2.79	2.67	2.63	2.65	2.73
12.00	DISCHG	2.82	2.88	2.87	2.81	2.71	2.60	2.54	2.53	2.60	2.70
13.00	DISCHG	2.81	2.88	2.89	2.84	2.74	2.61	2.48	2.36	2.26	2.18
14.00	DISCHG	2.13	2.14	2.21	2.35	2.52	2.68	2.80	2.85	2.82	2.74

15.00	DISCHG	2.62	2.50	2.39	2.29	2.21	2.14	2.08	2.04	2.01	1.98
16.00	DISCHG	1.96	1.95	1.94	1.93	1.92	1.92	1.92	1.92	1.92	1.92
17.00	DISCHG	1.92	1.92	1.92	1.92	1.93	1.93	1.93	1.93	1.93	1.94
18.00	DISCHG	1.94	1.94	1.94	1.94	1.95	1.95	1.95	1.95	1.95	1.96
19.00	DISCHG	1.96	1.96	1.96	1.96	1.96	1.96	1.93	1.88	1.81	1.73
20.00	DISCHG	1.63	1.54	1.44	1.34	1.25	1.18	1.15	1.16	1.22	1.31
21.00	DISCHG	1.40	1.47	1.51	1.52	1.50	1.48	1.45	1.44	1.44	1.45
22.00	DISCHG	1.46	1.47	1.47	1.45	1.42	1.39	1.36	1.33	1.31	1.29
23.00	DISCHG	1.27	1.26	1.25	1.24	1.24	1.24	1.25	1.27	1.30	1.33
24.00	DISCHG	1.35	1.34	1.27	1.16	1.02	.86	.72	.58	.46	.36
25.00	DISCHG	.28	.22	.17	.13	.09	.07	.05	.04	.03	.02
26.00	DISCHG	.01	.01	.01							

OPERATION RUNOFF CROSS SECTION 14

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	270.21	(RUNOFF)
10.45	12.47	(RUNOFF)
11.61	11.41	(RUNOFF)
12.61	11.54	(RUNOFF)
14.11	11.64	(RUNOFF)
18.95	6.76	(RUNOFF)
20.64	6.03	(RUNOFF)
21.60	5.23	(RUNOFF)
23.53	5.03	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.38	53.88	(RUNOFF)
10.46	4.07	(RUNOFF)
12.72	3.57	(RUNOFF)
14.24	3.55	(RUNOFF)
18.96	2.27	(RUNOFF)
23.59	1.61	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.62	45.62	5491.20
10.58	4.06	5490.16
14.46	3.36	5490.13
23.76	1.56	5490.06

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	131.12	(RUNOFF)

7.48	13.21	(RUNOFF)
10.45	5.80	(RUNOFF)
11.55	5.57	(RUNOFF)
12.55	5.67	(RUNOFF)
14.05	5.75	(RUNOFF)
18.95	3.20	(RUNOFF)
23.49	2.47	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 26

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPRGD : P3S2_OUT.TXT

JOB 1 PASS 4
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	142.84	5492.90
10.45	9.86	5490.39
11.57	8.64	5490.35
12.58	8.69	5490.35
14.09	8.51	5490.34
18.96	5.47	5490.22
23.51	3.95	5490.16

OPERATION RESVOR STRUCTURE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .36 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
24.70	.36	5500.17

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS	TIME INCREMENT = .10 HOURS	DRAINAGE AREA = .72 SQ.MI.
6.00 DISCHG	.01 .03 .05 .07 .09 .10 .12	.13 .14 .15	
7.00 DISCHG	.16 .16 .17 .17 .18 .18 .19	.19 .20 .20	
8.00 DISCHG	.20 .21 .21 .21 .22 .22 .22	.22 .22 .23	
9.00 DISCHG	.23 .23 .23 .23 .23 .23 .24	.24 .24 .24	
10.00 DISCHG	.24 .24 .25 .25 .25 .25 .25	.25 .25 .26	
11.00 DISCHG	.26 .26 .26 .26 .26 .26 .26	.27 .27 .27	
12.00 DISCHG	.27 .27 .27 .27 .27 .27 .28	.28 .28 .28	
13.00 DISCHG	.28 .28 .28 .28 .28 .29 .29	.29 .29 .29	
14.00 DISCHG	.29 .29 .29 .29 .30 .30 .30	.30 .30 .30	
15.00 DISCHG	.30 .30 .30 .30 .30 .31 .31	.31 .31 .31	
16.00 DISCHG	.31 .31 .31 .31 .31 .31 .31	.32 .32 .32	
17.00 DISCHG	.32 .32 .32 .32 .32 .32 .32	.32 .32 .32	
18.00 DISCHG	.33 .33 .33 .33 .33 .33 .33	.33 .33 .33	
19.00 DISCHG	.33 .33 .34 .34 .34 .34 .34	.34 .34 .34	
20.00 DISCHG	.34 .34 .34 .34 .34 .34 .34	.34 .34 .34	
21.00 DISCHG	.35 .35 .35 .35 .35 .35 .35	.35 .35 .35	
22.00 DISCHG	.35 .35 .35 .35 .35 .35 .35	.35 .36 .36	
23.00 DISCHG	.36 .36 .36 .36 .36 .36 .36	.36 .36 .36	
24.00 DISCHG	.36 .36 .36 .36 .36 .36 .36	.36 .36 .36	
25.00 DISCHG	.36 .36 .36 .36 .36 .36 .36	.36 .36 .36	
26.00 DISCHG	.36 .36 .36 .36 .36 .36 .36	.36 .36 .36	
27.00 DISCHG	.36 .36 .36 .36 .36 .36 .36	.36 .36 .36	
28.00 DISCHG	.36 .36 .36 .36 .36 .36 .36	.36 .36 .36	

29.00 DISCHG .36 .36 .36 .36 .36 .36 .36 .36 .36 .36

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.

0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .36 CFS, 99.22 % OF PEAK.

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .35 CFS.

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
25.30	.35	5420.01

OPERATION RUNOFF CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	151.65	(RUNOFF)
10.45	7.37	(RUNOFF)
11.60	6.79	(RUNOFF)
12.60	6.88	(RUNOFF)
14.10	6.95	(RUNOFF)
18.95	4.03	(RUNOFF)
23.53	3.01	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.22	151.65	5423.31
10.45	7.55	5420.30
11.60	7.01	5420.28
12.60	7.11	5420.28
14.10	7.21	5420.29
18.96	4.34	5420.17
23.53	3.36	5420.13

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	117.99	5304.29
10.58	7.52	5300.45
11.79	6.57	5300.39
12.80	6.67	5300.40
14.31	6.68	5300.40
19.07	4.33	5300.26
23.69	3.23	5300.19

OPERATION RUNOFF CROSS SECTION 12

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 4
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.15	332.30	(RUNOFF)
7.45	28.03	(RUNOFF)
10.45	11.94	(RUNOFF)
11.56	11.31	(RUNOFF)
12.56	11.41	(RUNOFF)
14.06	11.52	(RUNOFF)
18.95	6.39	(RUNOFF)
20.58	5.96	(RUNOFF)
21.56	5.00	(RUNOFF)
23.49	4.86	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	392.40	5307.24
10.46	19.44	5300.95
11.60	17.32	5300.87
12.60	17.49	5300.88
14.11	17.49	5300.88
18.95	10.71	5300.63
20.64	9.22	5300.55
21.59	8.27	5300.50
23.53	7.93	5300.48

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 4

EXECUTIVE CONTROL OPERATION INCREM

RECORD ID

MAIN TIME INCREMENT = .10 HOURS

EXECUTIVE CONTROL OPERATION COMPUT

RECORD ID

FROM XSECTION 58
TO XSECTION 12

STARTING TIME = .00 RAIN DEPTH = 1.80 RAIN DURATION= 1.00 RAIN TABLE NO.= 7 ANT. MOIST. COND= 2
ALTERNATE NO.= 1 STORM NO.= 6 MAIN TIME INCREMENT = .10 HOURS

OPERATION RUNOFF CROSS SECTION 58

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 5
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.23	57.02	(RUNOFF)
7.53	10.43	(RUNOFF)
10.46	4.93	(RUNOFF)
11.58	4.69	(RUNOFF)
12.58	4.83	(RUNOFF)
14.08	4.95	(RUNOFF)
18.95	2.92	(RUNOFF)
23.50	2.25	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	66.13	(RUNOFF)
10.47	5.19	(RUNOFF)
11.60	4.82	(RUNOFF)
12.60	4.93	(RUNOFF)
14.11	5.03	(RUNOFF)
18.95	3.00	(RUNOFF)
23.53	2.27	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 60

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	123.76	5683.72
10.46	10.12	5680.50
11.59	9.50	5680.48
12.59	9.75	5680.49
14.09	9.97	5680.50
18.95	5.92	5680.30
20.62	5.40	5680.27
23.52	4.52	5680.23

OPERATION RUNOFF CROSS SECTION 62

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.30	12.86	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 62

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 5
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	136.20	5702.97
10.46	11.66	5700.44
11.59	10.94	5700.42
12.59	11.23	5700.43
14.10	11.50	5700.44

18.95	6.86	5700.27
20.62	6.24	5700.25
21.59	5.38	5700.22
23.52	5.24	5700.21

OPERATION REACH CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.69	71.91	5492.73
10.66	11.63	5490.65
11.92	9.84	5490.59
12.94	9.86	5490.59
14.48	9.66	5490.58
19.19	6.81	5490.41
23.81	4.78	5490.29

OPERATION RUNOFF CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.31	88.96	(RUNOFF)
10.41	4.10	(RUNOFF)
12.70	3.53	(RUNOFF)
14.22	3.51	(RUNOFF)
18.88	2.17	(RUNOFF)
23.59	1.53	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 50

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.49	134.81	5494.17
11.83	13.15	5490.70
12.86	13.14	5490.70
14.40	12.85	5490.69
19.00	8.96	5490.54
21.83	6.73	5490.40
23.71	6.18	5490.37

OPERATION RUNOFF CROSS SECTION 52

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 5
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.08	995.46	(RUNOFF)
7.45	60.21	(RUNOFF)
10.39	24.83	(RUNOFF)
11.52	23.99	(RUNOFF)
12.52	24.12	(RUNOFF)
14.02	24.30	(RUNOFF)
18.89	12.85	(RUNOFF)
20.53	12.31	(RUNOFF)

21.51	10.13	(RUNOFF)
23.47	9.94	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 52

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.09	1055.77	5496.82
11.54	36.24	5490.59
12.55	36.07	5490.59
14.06	35.52	5490.58
18.95	21.86	5490.38
20.57	18.28	5490.32
21.53	16.69	5490.30
23.48	15.86	5490.29

0 *** WARNING - INFLOW EXCEEDED MAX.FLOW IN XSECTN TABLE 38 BY 53.8 CFS

*** WARNING REACH 38 ATT-KIN COEFF.(C) GREATER THAN 0.667, CONSIDER REDUCING MAIN TIME INCREMENT ***

OPERATION REACH CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	1001.99	5471.62
11.66	36.09	5461.12
12.67	35.90	5461.11
14.18	35.11	5461.09
19.05	21.84	5460.73
20.70	18.09	5460.62
21.66	16.66	5460.58
23.60	15.73	5460.56

OPERATION RUNOFF CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.25	35.34	(RUNOFF)

TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1 PASS 5
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT	PAGE 86

OPERATION ADDHYD CROSS SECTION 38

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	1036.70	5471.96
11.66	38.16	5461.17
12.66	38.01	5461.17
14.17	37.25	5461.15
19.01	23.08	5460.76
20.69	19.22	5460.65
21.65	17.65	5460.61
23.59	16.68	5460.58

OPERATION RESVOR STRUCTURE 93

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.20 CFS.

PEAK TIME(HRS) 25.00
 PEAK DISCHARGE(CFS) 1.20
 PEAK ELEVATION(FEET) 5467.18

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 3.52 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.01	.02	
6.00	DISCHG	.07	.14	.24	.34	.42	.48	.52	.55	.58	.60
7.00	DISCHG	.62	.64	.66	.67	.68	.70	.71	.72	.73	.74
8.00	DISCHG	.75	.76	.77	.78	.79	.79	.80	.81	.81	.82
9.00	DISCHG	.82	.83	.83	.84	.84	.84	.85	.85	.86	.86
10.00	DISCHG	.87	.87	.87	.88	.88	.89	.89	.90	.90	.90
11.00	DISCHG	.91	.91	.91	.92	.92	.92	.93	.93	.93	.94
12.00	DISCHG	.94	.94	.95	.95	.95	.95	.96	.96	.97	.97
13.00	DISCHG	.97	.97	.98	.98	.98	.99	.99	.99	.99	1.00
14.00	DISCHG	1.00	1.00	1.01	1.01	1.01	1.02	1.02	1.02	1.02	1.03
15.00	DISCHG	1.03	1.03	1.03	1.04	1.04	1.04	1.04	1.04	1.05	1.05
16.00	DISCHG	1.05	1.05	1.06	1.06	1.06	1.06	1.06	1.07	1.07	1.07
17.00	DISCHG	1.07	1.08	1.08	1.08	1.08	1.08	1.09	1.09	1.09	1.09
18.00	DISCHG	1.10	1.10	1.10	1.10	1.10	1.11	1.11	1.11	1.11	1.12
19.00	DISCHG	1.12	1.12	1.12	1.12	1.13	1.13	1.13	1.13	1.13	1.13
20.00	DISCHG	1.14	1.14	1.14	1.14	1.14	1.14	1.14	1.15	1.15	1.15
21.00	DISCHG	1.15	1.15	1.15	1.16	1.16	1.16	1.16	1.16	1.16	1.16
22.00	DISCHG	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.18	1.18	1.18
23.00	DISCHG	1.18	1.18	1.18	1.18	1.19	1.19	1.19	1.19	1.19	1.19
24.00	DISCHG	1.19	1.19	1.19	1.20	1.20	1.20	1.20	1.20	1.20	1.20
25.00	DISCHG	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
26.00	DISCHG	1.20	1.20	1.20	1.20	1.20	1.20	1.19	1.19	1.19	1.19
27.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
28.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
29.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19

TR20 XEQ 01-03-00 14:13
 REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

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

*** WARNING - REACH 36 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT 1.19 CFS, 99.55 % OF PEAK.

OPERATION REACH CROSS SECTION 36

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = 1.19 CFS.

PEAK TIME(HRS) 25.50
 PEAK DISCHARGE(CFS) 1.19
 PEAK ELEVATION(FEET) 5420.04

OPERATION RUNOFF CROSS SECTION 36

PEAK TIME(HRS) 6.21
 PEAK DISCHARGE(CFS) 27.05
 PEAK ELEVATION(FEET) (RUNOFF)

OPERATION ADDHYD CROSS SECTION 36

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.21	27.05	5420.68
7.58	3.99	5420.12

OPERATION REACH CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.57	16.41	5360.44

OPERATION RUNOFF CROSS SECTION 32

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	70.57	(RUNOFF)
10.46	4.25	(RUNOFF)
11.61	3.91	(RUNOFF)
12.61	3.99	(RUNOFF)
14.11	4.04	(RUNOFF)
18.92	2.38	(RUNOFF)
23.53	1.78	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 32

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	76.57	5361.84
10.48	6.66	5360.20
11.64	6.02	5360.18
12.63	6.13	5360.18
14.16	6.18	5360.19
18.96	4.38	5360.13
23.56	3.57	5360.11

OPERATION RESVOR STRUCTURE 7

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.28	76.60	5360.85
10.48	6.66	5360.07
11.64	6.02	5360.07
12.64	6.13	5360.07
14.16	6.18	5360.07
18.96	4.38	5360.05
23.56	3.57	5360.04

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS				TIME INCREMENT = .10 HOURS				DRAINAGE AREA = 4.14 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.08	1.37	8.71
6.00	DISCHG	27.13	52.90	72.13	76.46	68.33	56.29	46.59	39.02	32.70	27.61
7.00	DISCHG	23.67	20.79	18.75	17.22	16.20	15.39	14.80	14.22	13.68	13.13

8.00	DISCHG	12.69	12.23	11.59	10.66	9.67	8.80	8.12	7.63	7.28	7.01
9.00	DISCHG	6.84	6.71	6.63	6.57	6.54	6.52	6.52	6.52	6.53	6.55
10.00	DISCHG	6.56	6.58	6.60	6.62	6.64	6.66	6.61	6.40	6.00	5.53
11.00	DISCHG	5.10	4.84	4.83	5.08	5.44	5.78	6.00	5.98	5.72	5.35
12.00	DISCHG	5.02	4.80	4.84	5.12	5.50	5.86	6.11	6.08	5.83	5.47
13.00	DISCHG	5.11	4.83	4.62	4.47	4.35	4.27	4.29	4.49	4.90	5.39
14.00	DISCHG	5.85	6.13	6.16	5.92	5.56	5.21	4.93	4.73	4.58	4.47
15.00	DISCHG	4.38	4.33	4.28	4.26	4.23	4.22	4.21	4.21	4.21	4.21
16.00	DISCHG	4.22	4.22	4.22	4.23	4.23	4.24	4.25	4.25	4.26	4.26
17.00	DISCHG	4.27	4.27	4.28	4.28	4.29	4.29	4.30	4.31	4.31	4.32
18.00	DISCHG	4.32	4.33	4.33	4.34	4.34	4.35	4.36	4.36	4.37	4.37
19.00	DISCHG	4.37	4.35	4.25	4.07	3.86	3.67	3.50	3.34	3.16	3.00
20.00	DISCHG	2.86	2.79	2.87	3.09	3.37	3.64	3.82	3.87	3.81	3.68
21.00	DISCHG	3.55	3.46	3.44	3.47	3.54	3.61	3.65	3.64	3.58	3.49
22.00	DISCHG	3.42	3.35	3.31	3.27	3.25	3.23	3.22	3.21	3.21	3.20
23.00	DISCHG	3.20	3.21	3.26	3.35	3.45	3.54	3.55	3.40	3.08	2.70
24.00	DISCHG	2.33	2.05	1.84	1.67	1.54	1.44	1.37	1.32	1.28	1.25
25.00	DISCHG	1.23	1.22	1.21	1.20	1.20	1.19	1.19	1.19	1.19	1.19
26.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
27.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
28.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
29.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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OPERATION REACH CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.52	61.30	5311.45
10.62	6.63	5310.27
12.84	5.87	5310.23
14.38	5.86	5310.23
19.09	4.37	5310.17
23.72	3.47	5310.14

OPERATION RUNOFF CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.27	22.33	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 30

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.45	76.54	5311.78
10.53	8.57	5310.34
12.74	7.55	5310.30
14.28	7.52	5310.30
18.99	5.51	5310.22
23.61	4.28	5310.17

OPERATION RUNOFF CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.20	10.15	(RUNOFF)
7.55	2.04	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 34

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.43	81.41	5391.85
10.49	9.57	5390.29
11.68	8.30	5390.25
12.69	8.43	5390.25
14.22	8.40	5390.25
18.97	6.12	5390.18
23.57	4.74	5390.14

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

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OPERATION RESVOR STRUCTURE 2

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.46	80.88	5311.28
10.51	9.56	5310.15
11.70	8.30	5310.13
12.71	8.42	5310.13
14.24	8.39	5310.13
18.98	6.12	5310.10
23.59	4.73	5310.08

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = 4.59 SQ.MI.		
5.00	DISCHG	.00	.00	.00	.00	.00	.00	.00	.00	.06	1.46
6.00	DISCHG	9.13	28.31	53.06	71.58	80.10	80.36	75.49	68.36	60.50	52.86
7.00	DISCHG	45.98	40.13	35.35	31.56	28.63	26.39	24.65	23.22	21.99	20.92
8.00	DISCHG	20.03	19.23	18.32	17.18	15.92	14.69	13.57	12.61	11.82	11.18
9.00	DISCHG	10.69	10.31	10.02	9.82	9.67	9.57	9.50	9.47	9.45	9.44
10.00	DISCHG	9.45	9.47	9.49	9.51	9.54	9.56	9.55	9.38	9.01	8.53
11.00	DISCHG	8.01	7.56	7.32	7.35	7.57	7.88	8.17	8.30	8.19	7.92
12.00	DISCHG	7.57	7.27	7.14	7.26	7.56	7.93	8.26	8.42	8.32	8.06
13.00	DISCHG	7.71	7.36	7.03	6.74	6.50	6.30	6.20	6.29	6.62	7.11
14.00	DISCHG	7.64	8.11	8.37	8.34	8.12	7.81	7.48	7.16	6.88	6.65
15.00	DISCHG	6.46	6.31	6.19	6.10	6.04	5.99	5.95	5.93	5.91	5.91
16.00	DISCHG	5.90	5.90	5.90	5.91	5.91	5.92	5.93	5.93	5.94	5.95
17.00	DISCHG	5.96	5.96	5.97	5.98	5.99	6.00	6.00	6.01	6.02	6.03
18.00	DISCHG	6.04	6.04	6.05	6.06	6.07	6.08	6.08	6.09	6.10	6.11
19.00	DISCHG	6.12	6.10	6.02	5.84	5.61	5.37	5.13	4.88	4.62	4.36
20.00	DISCHG	4.13	3.96	3.93	4.07	4.32	4.61	4.88	5.05	5.09	5.04
21.00	DISCHG	4.95	4.85	4.78	4.78	4.81	4.87	4.92	4.94	4.90	4.83
22.00	DISCHG	4.74	4.66	4.58	4.51	4.46	4.42	4.38	4.36	4.34	4.32
23.00	DISCHG	4.31	4.32	4.36	4.44	4.55	4.66	4.73	4.64	4.36	3.97
24.00	DISCHG	3.54	3.12	2.75	2.42	2.15	1.93	1.75	1.61	1.50	1.42
25.00	DISCHG	1.36	1.31	1.27	1.25	1.23	1.22	1.21	1.20	1.20	1.19

26.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
27.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
28.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
29.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19

OPERATION REACH CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
7.00	57.04	5250.81
13.07	8.01	5250.16
14.67	7.75	5250.16
19.27	6.09	5250.12
23.89	4.55	5250.09

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

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OPERATION RUNOFF CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.69	4.69	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 28

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.98	60.91	5250.87
13.03	8.86	5250.18
14.63	8.58	5250.17
19.19	6.71	5250.13
23.85	4.96	5250.10

OPERATION RESVOR STRUCTURE 1

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.99	60.91	5280.91
13.04	8.86	5280.13
14.64	8.58	5280.13
19.20	6.71	5280.10
23.86	4.96	5280.07

TIME(HRS)	FIRST HYDROGRAPH POINT =	.00 HOURS	TIME INCREMENT =	.10 HOURS	DRAINAGE AREA =	4.78 SQ.MI.
5.00	DISCHG	.00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .00 .04				
6.00	DISCHG	.27 .99 3.28 9.08 18.92 30.75 41.98 50.96 57.00 60.17				
7.00	DISCHG	60.91 59.85 57.59 54.57 51.16 47.64 44.23 41.05 38.15 35.53				
8.00	DISCHG	33.18 31.08 29.20 27.52 25.96 24.46 22.98 21.53 20.13 18.81				
9.00	DISCHG	17.58 16.48 15.50 14.64 13.89 13.26 12.73 12.29 11.92 11.62				
10.00	DISCHG	11.38 11.19 11.04 10.93 10.84 10.77 10.73 10.69 10.65 10.56				
11.00	DISCHG	10.41 10.17 9.88 9.55 9.25 9.03 8.90 8.88 8.92 8.96				
12.00	DISCHG	8.97 8.91 8.78 8.62 8.48 8.40 8.41 8.50 8.64 8.77				
13.00	DISCHG	8.85 8.84 8.75 8.60 8.40 8.18 7.96 7.75 7.57 7.47				
14.00	DISCHG	7.47 7.58 7.79 8.05 8.30 8.48 8.57 8.56 8.47 8.33				

15.00	DISCHG	8.16	7.97	7.79	7.61	7.44	7.29	7.16	7.04	6.94	6.85
16.00	DISCHG	6.78	6.73	6.68	6.64	6.62	6.59	6.58	6.57	6.56	6.56
17.00	DISCHG	6.55	6.55	6.56	6.56	6.57	6.57	6.58	6.58	6.59	6.60
18.00	DISCHG	6.61	6.61	6.62	6.63	6.64	6.65	6.66	6.67	6.68	6.69
19.00	DISCHG	6.69	6.70	6.71	6.70	6.67	6.61	6.50	6.36	6.19	5.99
20.00	DISCHG	5.78	5.56	5.33	5.13	4.96	4.87	4.86	4.92	5.02	5.13
21.00	DISCHG	5.23	5.29	5.31	5.31	5.29	5.28	5.28	5.29	5.32	5.34
22.00	DISCHG	5.34	5.32	5.29	5.25	5.19	5.13	5.08	5.02	4.97	4.93
23.00	DISCHG	4.89	4.85	4.83	4.81	4.81	4.82	4.86	4.91	4.95	4.96
24.00	DISCHG	4.89	4.74	4.52	4.25	3.95	3.65	3.34	3.06	2.79	2.55
25.00	DISCHG	2.34	2.15	1.99	1.85	1.73	1.63	1.55	1.48	1.43	1.38

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TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 PASS 5
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT PAGE 92

26.00	DISCHG	1.34	1.31	1.28	1.26	1.25	1.24	1.23	1.22	1.21	1.21
27.00	DISCHG	1.20	1.20	1.20	1.19	1.19	1.19	1.19	1.19	1.19	1.19
28.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19
29.00	DISCHG	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19	1.19

OPERATION RUNOFF CROSS SECTION 16

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
6.30 18.51 (RUNOFF)

OPERATION REACH CROSS SECTION 16

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
6.77 10.24 5250.10

OPERATION RESVOR STRUCTURE 18

PEAK TIME(HRS) PEAK DISCHARGE(CFS) PEAK ELEVATION(FEET)
6.93 9.83 5321.09

TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = .30 SQ.MI.		
6.00	DISCHG	.00	.04	.29	1.12	2.71	4.84	6.93	8.53	9.46	9.81
7.00	DISCHG	9.73	9.38	8.87	8.29	7.71	7.16	6.67	6.24	5.87	5.56
8.00	DISCHG	5.28	5.04	4.82	4.62	4.42	4.23	4.01	3.78	3.54	3.31
9.00	DISCHG	3.09	2.89	2.72	2.57	2.44	2.34	2.25	2.18	2.12	2.08
10.00	DISCHG	2.04	2.01	1.99	1.97	1.96	1.95	1.95	1.94	1.94	1.93
11.00	DISCHG	1.91	1.86	1.80	1.72	1.64	1.58	1.55	1.54	1.56	1.59
12.00	DISCHG	1.61	1.61	1.59	1.55	1.50	1.47	1.46	1.48	1.52	1.56
13.00	DISCHG	1.60	1.61	1.59	1.56	1.51	1.45	1.39	1.34	1.30	1.27
14.00	DISCHG	1.26	1.28	1.33	1.40	1.48	1.54	1.57	1.57	1.54	1.50
15.00	DISCHG	1.45	1.41	1.36	1.32	1.28	1.25	1.22	1.20	1.18	1.17
16.00	DISCHG	1.15	1.14	1.14	1.13	1.13	1.12	1.12	1.12	1.12	1.12
17.00	DISCHG	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
18.00	DISCHG	1.12	1.13	1.13	1.13	1.13	1.13	1.13	1.14	1.14	1.14
19.00	DISCHG	1.14	1.14	1.14	1.14	1.14	1.13	1.11	1.08	1.04	1.00
20.00	DISCHG	.95	.90	.85	.80	.76	.73	.73	.74	.77	.81
21.00	DISCHG	.84	.86	.87	.87	.86	.85	.85	.85	.85	.86
22.00	DISCHG	.86	.86	.85	.84	.83	.81	.80	.79	.78	.77

23.00	DISCHG	.76	.75	.75	.74	.74	.74	.75	.76	.78	.79
24.00	DISCHG	.78	.76	.71	.65	.57	.50	.43	.36	.31	.25
25.00	DISCHG	.21	.17	.14	.12	.09	.08	.06	.05	.04	.03
26.00	DISCHG	.03	.02	.02	.01	.01	.01	.00			

OPERATION RUNOFF CROSS SECTION 14

1

TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
 REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 5
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PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	137.61	(RUNOFF)
10.46	7.88	(RUNOFF)
11.61	7.25	(RUNOFF)
12.61	7.36	(RUNOFF)
14.11	7.46	(RUNOFF)
18.95	4.39	(RUNOFF)
23.53	3.29	(RUNOFF)

OPERATION RUNOFF CROSS SECTION 48

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.41	22.63	(RUNOFF)

OPERATION REACH CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.70	17.85	5490.58

OPERATION RUNOFF CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.18	60.28	(RUNOFF)
7.50	7.66	(RUNOFF)
10.45	3.49	(RUNOFF)
11.55	3.37	(RUNOFF)
12.55	3.45	(RUNOFF)
14.05	3.52	(RUNOFF)
18.95	1.99	(RUNOFF)
23.49	1.55	(RUNOFF)

OPERATION ADDEYD CROSS SECTION 26

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	63.84	5491.66
10.46	5.85	5490.23
11.56	5.20	5490.21
12.57	5.23	5490.21
14.08	5.14	5490.21
18.96	3.37	5490.13

23.51

2.45

5490.10

OPERATION RESVOR STRUCTURE 94

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT

JOB 1 PASS 5
PAGE 94

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .19 CFS.

PEAK TIME(HRS)			PEAK DISCHARGE(CFS)			PEAK ELEVATION(FEET)					
24.80			.19			5499.14					
TIME(HRS)	FIRST HYDROGRAPH POINT = .00 HOURS					TIME INCREMENT = .10 HOURS			DRAINAGE AREA = .72 SQ.MI.		
6.00	DISCHG	.00	.01	.02	.03	.04	.04	.05	.05	.06	.06
7.00	DISCHG	.07	.07	.07	.08	.08	.08	.08	.09	.09	.09
8.00	DISCHG	.09	.09	.10	.10	.10	.10	.10	.10	.10	.11
9.00	DISCHG	.11	.11	.11	.11	.11	.11	.11	.11	.11	.12
10.00	DISCHG	.12	.12	.12	.12	.12	.12	.12	.12	.12	.12
11.00	DISCHG	.12	.13	.13	.13	.13	.13	.13	.13	.13	.13
12.00	DISCHG	.13	.13	.13	.13	.13	.14	.14	.14	.14	.14
13.00	DISCHG	.14	.14	.14	.14	.14	.14	.14	.14	.14	.14
14.00	DISCHG	.15	.15	.15	.15	.15	.15	.15	.15	.15	.15
15.00	DISCHG	.15	.15	.15	.15	.15	.15	.15	.16	.16	.16
16.00	DISCHG	.16	.16	.16	.16	.16	.16	.16	.16	.16	.16
17.00	DISCHG	.16	.16	.16	.16	.16	.16	.16	.17	.17	.17
18.00	DISCHG	.17	.17	.17	.17	.17	.17	.17	.17	.17	.17
19.00	DISCHG	.17	.17	.17	.17	.17	.17	.17	.17	.18	.18
20.00	DISCHG	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18
21.00	DISCHG	.18	.18	.18	.18	.18	.18	.18	.18	.18	.18
22.00	DISCHG	.18	.18	.18	.18	.18	.18	.18	.19	.19	.19
23.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
24.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
25.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
26.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
27.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
28.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19
29.00	DISCHG	.19	.19	.19	.19	.19	.19	.19	.19	.19	.19

***WARNING - LACK OF LOW FLOW DEFINITION FOR XSECT TABLE 24. MAX.FLOW LESS THAN 2ND TABLE VALUE.
0 *** WARNING - REACH 24 INFLOW HYDROGRAPH VOLUME TRUNCATED ABOVE BASEFLOW AT .19 CFS, 99.24 % OF PEAK.

OPERATION REACH CROSS SECTION 24

*** WARNING-NO PEAK FOUND, MAXIMUM DISCHARGE = .18 CFS.

PEAK TIME(HRS)			PEAK DISCHARGE(CFS)			PEAK ELEVATION(FEET)		
26.20			.18			5420.01		

OPERATION RUNOFF CROSS SECTION 24

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 5
PAGE 95

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	72.82	(RUNOFF)
10.46	4.53	(RUNOFF)
11.60	4.21	(RUNOFF)
12.60	4.28	(RUNOFF)
14.10	4.35	(RUNOFF)
18.96	2.56	(RUNOFF)
23.53	1.93	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 24

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.24	72.82	5422.14
10.46	4.60	5420.18
11.60	4.30	5420.17
12.60	4.38	5420.18
14.10	4.47	5420.18
18.96	2.71	5420.11
23.53	2.10	5420.08

OPERATION REACH CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.47	52.32	5302.19
10.59	4.57	5300.27
12.81	4.05	5300.24
14.33	4.06	5300.24
19.07	2.70	5300.16
23.69	2.00	5300.12

OPERATION RUNOFF CROSS SECTION 12

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.16	182.68	(RUNOFF)
7.47	17.92	(RUNOFF)
10.46	7.80	(RUNOFF)
11.56	7.42	(RUNOFF)
12.56	7.51	(RUNOFF)
14.06	7.62	(RUNOFF)
18.95	4.27	(RUNOFF)
20.58	3.99	(RUNOFF)
23.49	3.26	(RUNOFF)

OPERATION ADDHYD CROSS SECTION 12

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 PASS 5
PAGE 96

PEAK TIME(HRS)	PEAK DISCHARGE(CFS)	PEAK ELEVATION(FEET)
6.19	206.05	5305.24
10.46	12.35	5300.69
11.59	11.05	5300.64
12.60	11.19	5300.64
14.11	11.20	5300.65
18.95	6.96	5300.42
20.63	5.96	5300.36
21.58	5.38	5300.32
23.52	5.16	5300.31

EXECUTIVE CONTROL OPERATION ENDCMP

RECORD ID

COMPUTATIONS COMPLETED FOR PASS 5

EXECUTIVE CONTROL OPERATION ENDJOB

RECORD ID

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 SUMMARY
PAGE 97

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 58	RUNOFF	.74	7	2	.10	.0	3.80	24.00	1.27	---	6.17	588.29	793.9
XSECTION 60	RUNOFF	.67	7	2	.10	.0	3.80	24.00	1.40	---	6.20	558.28	835.8
XSECTION 60	ADDHYD	1.41	7	2	.10	.0	3.80	24.00	1.33	5693.76	6.18	1143.57	811.6
XSECTION 62	RUNOFF	.27	7	2	.10	.0	3.80	24.00	1.17	---	6.22	172.87	645.0
XSECTION 62	ADDHYD	1.68	7	2	.10	.0	3.80	24.00	1.31	5712.22	6.19	1314.61	783.9
XSECTION 50	REACH	1.68	7	2	.10	.0	3.80	24.00	1.31	5502.94	6.52	933.43	556.6
XSECTION 50	RUNOFF	.26	7	2	.10	.0	3.80	24.00	2.41	---	6.27	328.86	1279.6
XSECTION 50	ADDHYD	1.93	7	2	.10	.0	3.80	24.00	1.45	5505.77	6.48	1181.56	610.9
XSECTION 52	RUNOFF	1.34	7	2	.10	.0	3.80	24.00	2.74	---	6.06	2963.29	2204.8
XSECTION 52	ADDHYD	3.28	7	2	.10	.0	3.80	24.00	1.98	5510.01	6.09	3329.70	1015.8
XSECTION 38	REACH	3.28	7	2	.10	.0	3.80	24.00	1.98	5493.98	6.19	3283.61	1001.7
XSECTION 38	RUNOFF	.24	7	2	.10	.0	3.80	24.00	1.59	---	6.20	231.77	949.9
XSECTION 38	ADDHYD	3.52	7	2	.10	.0	3.80	24.00	1.95	5496.25	6.20	3515.23	998.1
STRUCTURE 93	RESVOR	3.52	7	2	.10	.0	3.80	24.00	.04	5486.46	24.70?	4.82?	1.4
XSECTION 36	REACH	3.52	7	2	.10	.0	3.80	24.00	.04	5420.14	25.10?	4.81?	1.4

+

XSECTION	58	RUNOFF	.74	7	2	.10	.0	3.50	24.00	1.07	---	6.17	487.39	657.7
XSECTION	60	RUNOFF	.67	7	2	.10	.0	3.50	24.00	1.20	---	6.20	467.26	699.5
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	3.50	24.00	1.13	5691.81	6.19	952.25	675.8
XSECTION	62	RUNOFF	.27	7	2	.10	.0	3.50	24.00	.98	---	6.22	141.37	527.5
XSECTION	62	ADDHYD	1.68	7	2	.10	.0	3.50	24.00	1.11	5710.44	6.19	1092.02	651.2
XSECTION	50	REACH	1.68	7	2	.10	.0	3.50	24.00	1.11	5500.94	6.53	758.14	452.1
XSECTION	50	RUNOFF	.26	7	2	.10	.0	3.50	24.00	2.14	---	6.28	289.80	1127.6
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	3.50	24.00	1.24	5503.41	6.49	974.75	504.0
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	3.50	24.00	2.45	---	6.06	2659.53	1978.8
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	3.50	24.00	1.74	5507.86	6.08	2959.33	902.8
XSECTION	38	REACH	3.28	7	2	.10	.0	3.50	24.00	1.74	5490.33	6.19	2910.98	888.0
XSECTION	38	RUNOFF	.24	7	2	.10	.0	3.50	24.00	1.37	---	6.21	196.52	805.4
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	3.50	24.00	1.71	5492.25	6.20	3107.21	882.2
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	3.50	24.00	.04	5483.25	24.70?	3.87?	1.1
XSECTION	36	REACH	3.52	7	2	.10	.0	3.50	24.00	.04	5420.12	25.10?	3.87?	1.1
XSECTION	36	RUNOFF	.18	7	2	.10	.0	3.50	24.00	1.32	---	6.16	155.75	846.5
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	3.50	24.00	.10	5422.80	6.16	155.82	42.0
XSECTION	32	REACH	3.71	7	2	.10	.0	3.50	24.00	.10	5362.57	6.36	122.65	33.1
XSECTION	32	RUNOFF	.43	7	2	.10	.0	3.50	24.00	1.42	---	6.20	368.51	851.1
XSECTION	32	ADDHYD	4.14	7	2	.10	.0	3.50	24.00	.24	5365.17	6.23	469.95	113.5
STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	3.50	24.00	.24	5363.93	6.24	469.96	113.5

1

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 SUMMARY
PAGE 99

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 30	REACH	4.14	7	2	.10	.0	3.50	24.00	.24	5314.06	6.42	420.69	101.6	
XSECTION 30	RUNOFF	.27	7	2	.10	.0	3.50	24.00	1.13	---	6.21	175.99	642.3	
XSECTION 30	ADDHYD	4.41	7	2	.10	.0	3.50	24.00	.29	5314.80	6.36	549.95	124.6	
XSECTION 34	RUNOFF	.18	7	2	.10	.0	3.50	24.00	.95	---	6.13	115.90	643.9	
XSECTION 34	ADDHYD	4.59	7	2	.10	.0	3.50	24.00	.32	5395.99	6.32	614.42	133.8	
STRUCTURE 2	RESVOR	4.59	7	2	.10	.0	3.50	24.00	.32	5315.94	6.51	512.19	111.5	
XSECTION 28	REACH	4.59	7	2	.10	.0	3.50	24.00	.32	5253.05	6.80	445.12	96.9	
XSECTION 28	RUNOFF	.19	7	2	.10	.0	3.50	24.00	.94	---	6.55	57.45	299.2	
XSECTION 28	ADDHYD	4.78	7	2	.10	.0	3.50	24.00	.34	5253.27	6.77	494.15	103.3	
STRUCTURE 1	RESVOR	4.78	7	2	.10	.0	3.50	24.00	.34	5283.91	6.83	490.44	102.5	
XSECTION 16	RUNOFF	.30	7	2	.10	.0	3.50	24.00	1.06	---	6.23	171.19	570.6	

XSECTION	16	REACH	.30	7	2	.10	.0	3.50	24.00	1.06	5250.90	6.44	135.23	450.8
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	3.50	24.00	1.06	5327.86	6.85	74.32	247.7
XSECTION	14	RUNOFF	.76	7	2	.10	.0	3.50	24.00	1.48	---	6.19	679.14	892.4
XSECTION	48	RUNOFF	.31	7	2	.10	.0	3.50	24.00	1.20	---	6.34	163.38	528.8
XSECTION	26	REACH	.31	7	2	.10	.0	3.50	24.00	1.20	5492.92	6.54	146.30	473.5
XSECTION	26	RUNOFF	.41	7	2	.10	.0	3.50	24.00	1.28	---	6.13	364.84	892.0
XSECTION	26	ADDHYD	.72	7	2	.10	.0	3.50	24.00	1.24	5494.77	6.16	410.40	571.6
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	3.50	24.00	.04	5503.38	24.50?	.90?	1.2
XSECTION	24	REACH	.72	7	2	.10	.0	3.50	24.00	.04	5420.04	25.40?	.89?	1.2
XSECTION	24	RUNOFF	.49	7	2	.10	.0	3.50	24.00	1.37	---	6.19	402.06	829.0
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	3.50	24.00	.57	5425.32	6.19	402.06	334.2
XSECTION	12	REACH	1.20	7	2	.10	.0	3.50	24.00	.57	5306.68	6.37	339.57	282.3
XSECTION	12	RUNOFF	.66	7	2	.10	.0	3.50	24.00	1.65	---	6.13	768.20	1169.2
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	3.50	24.00	.95	5314.04	6.18	977.85	525.7

ALTERNATE 1 STORM 3

XSECTION	58	RUNOFF	.74	7	2	.10	.0	3.10	24.00	.83	---	6.18	362.17	488.8
XSECTION	60	RUNOFF	.67	7	2	.10	.0	3.10	24.00	.93	---	6.21	353.30	528.9
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	3.10	24.00	.88	5689.38	6.20	713.80	506.6
XSECTION	62	RUNOFF	.27	7	2	.10	.0	3.10	24.00	.75	---	6.23	102.69	383.2
XSECTION	62	ADDHYD	1.68	7	2	.10	.0	3.10	24.00	.86	5708.22	6.20	815.19	486.1
XSECTION	50	REACH	1.68	7	2	.10	.0	3.10	24.00	.86	5498.52	6.55	545.32	325.2
XSECTION	50	RUNOFF	.26	7	2	.10	.0	3.10	24.00	1.78	---	6.28	238.87	929.5
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	3.10	24.00	.98	5500.52	6.50	721.43	373.0
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	3.10	24.00	2.08	---	6.06	2256.96	1679.3
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	3.10	24.00	1.43	5505.08	6.08	2479.59	756.4

TR20 XEQ 01-03-00 14:13
REV PC 09/83(.2)

SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

JOB 1 SUMMARY
PAGE 100

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 3														
XSECTION	38	REACH	3.28	7	2	.10	.0	3.10	24.00	1.43	5485.60	6.20	2428.59	740.9
XSECTION	38	RUNOFF	.24	7	2	.10	.0	3.10	24.00	1.09	---	6.21	151.98	622.9
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	3.10	24.00	1.41	5487.08	6.20	2580.08	732.6
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	3.10	24.00	.03	5479.09	24.80?	3.18?	.9
XSECTION	36	REACH	3.52	7	2	.10	.0	3.10	24.00	.03	5420.10	25.20?	3.18?	.9
XSECTION	36	RUNOFF	.18	7	2	.10	.0	3.10	24.00	1.04	---	6.17	120.04	652.4
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	3.10	24.00	.08	5422.55	6.17	120.06	32.4
XSECTION	32	REACH	3.71	7	2	.10	.0	3.10	24.00	.08	5362.21	6.37	91.91	24.8

XSECTION	32	RUNOFF	.43	7	2	.10	.0	3.10	24.00	1.13	---	6.20	286.92	662.6
XSECTION	32	ADDHYD	4.14	7	2	.10	.0	3.10	24.00	.19	5364.36	6.24	361.27	87.3
STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	3.10	24.00	.19	5363.22	6.24	362.97	87.7
XSECTION	30	REACH	4.14	7	2	.10	.0	3.10	24.00	.19	5313.50	6.43	318.38	76.9
XSECTION	30	RUNOFF	.27	7	2	.10	.0	3.10	24.00	.88	---	6.22	131.65	480.5
XSECTION	30	ADDHYD	4.41	7	2	.10	.0	3.10	24.00	.23	5314.02	6.37	413.55	93.7
XSECTION	34	RUNOFF	.18	7	2	.10	.0	3.10	24.00	.72	---	6.14	84.26	468.1
XSECTION	34	ADDHYD	4.59	7	2	.10	.0	3.10	24.00	.25	5394.82	6.33	459.84	100.1
STRUCTURE	2	RESVOR	4.59	7	2	.10	.0	3.10	24.00	.25	5314.77	6.51	397.57	86.6
XSECTION	28	REACH	4.59	7	2	.10	.0	3.10	24.00	.25	5252.59	6.81	342.04	74.5
XSECTION	28	RUNOFF	.19	7	2	.10	.0	3.10	24.00	.71	---	6.56	41.03	213.7
XSECTION	28	ADDHYD	4.78	7	2	.10	.0	3.10	24.00	.27	5252.75	6.78	377.30	78.9
STRUCTURE	1	RESVOR	4.78	7	2	.10	.0	3.10	24.00	.27	5283.10	6.84	374.37	78.2
XSECTION	16	RUNOFF	.30	7	2	.10	.0	3.10	24.00	.81	---	6.23	126.09	420.3
XSECTION	16	REACH	.30	7	2	.10	.0	3.10	24.00	.81	5250.76	6.47	95.17	317.2
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	3.10	24.00	.81	5326.16	6.82	61.60	205.3
XSECTION	14	RUNOFF	.76	7	2	.10	.0	3.10	24.00	1.19	---	6.20	532.01	699.1
XSECTION	48	RUNOFF	.31	7	2	.10	.0	3.10	24.00	.93	---	6.35	122.66	397.0
XSECTION	26	REACH	.31	7	2	.10	.0	3.10	24.00	.94	5492.66	6.56	108.02	349.6
XSECTION	26	RUNOFF	.41	7	2	.10	.0	3.10	24.00	1.00	---	6.13	280.18	685.0
XSECTION	26	ADDHYD	.72	7	2	.10	.0	3.10	24.00	.97	5494.08	6.16	311.29	433.6
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	3.10	24.00	.03	5502.22	24.60?	.70?	1.0
XSECTION	24	REACH	.72	7	2	.10	.0	3.10	24.00	.03	5420.03	25.30?	.69?	1.0
XSECTION	24	RUNOFF	.49	7	2	.10	.0	3.10	24.00	1.09	---	6.20	311.18	641.6
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	3.10	24.00	.46	5424.59	6.20	311.18	258.7
XSECTION	12	REACH	1.20	7	2	.10	.0	3.10	24.00	.45	5305.80	6.39	257.70	214.2
XSECTION	12	RUNOFF	.66	7	2	.10	.0	3.10	24.00	1.34	---	6.13	613.89	934.4
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	3.10	24.00	.77	5311.54	6.18	765.76	411.7

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TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	SUMMARY
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPRD : P3S2_OUT.TXT		PAGE 101

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	4											
+														
XSECTION	58	RUNOFF	.74	7	2	.10	.0	2.70	24.00	.60	---	6.19	249.43	336.6
XSECTION	60	RUNOFF	.67	7	2	.10	.0	2.70	24.00	.69	---	6.22	249.62	373.7
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	2.70	24.00	.64	5687.18	6.21	497.97	353.4
XSECTION	62	RUNOFF	.27	7	2	.10	.0	2.70	24.00	.53	---	6.24	68.36	255.1
XSECTION	62	ADDHYD	1.68	7	2	.10	.0	2.70	24.00	.63	5706.22	6.21	565.32	337.1

XSECTION	50	REACH	1.68	7	2	.10	.0	2.70	24.00	.63	5496.51	6.58	358.48	213.8
XSECTION	50	RUNOFF	.26	7	2	.10	.0	2.70	24.00	1.44	---	6.29	189.67	738.0
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	2.70	24.00	.74	5497.98	6.51	497.83	257.4
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	2.70	24.00	1.72	---	6.07	1858.74	1383.0
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	2.70	24.00	1.14	5502.40	6.08	2017.48	615.5
XSECTION	38	REACH	3.28	7	2	.10	.0	2.70	24.00	1.14	5481.05	6.20	1964.36	599.3
XSECTION	38	RUNOFF	.24	7	2	.10	.0	2.70	24.00	.82	---	6.22	110.84	454.3
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	2.70	24.00	1.12	5482.13	6.20	2074.55	589.0
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	2.70	24.00	.02	5475.13	24.80?	2.52?	.7
XSECTION	36	REACH	3.52	7	2	.10	.0	2.70	24.00	.02	5420.08	25.30?	2.52?	.7
XSECTION	36	RUNOFF	.18	7	2	.10	.0	2.70	24.00	.78	---	6.18	87.11	473.4
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	2.70	24.00	.06	5422.09	6.18	87.11	23.5
XSECTION	32	REACH	3.71	7	2	.10	.0	2.70	24.00	.06	5361.54	6.39	64.19	17.3
XSECTION	32	RUNOFF	.43	7	2	.10	.0	2.70	24.00	.86	---	6.21	211.14	487.6
XSECTION	32	ADDHYD	4.14	7	2	.10	.0	2.70	24.00	.14	5363.61	6.25	261.48	63.2
STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	2.70	24.00	.14	5362.54	6.26	260.36	62.9
XSECTION	30	REACH	4.14	7	2	.10	.0	2.70	24.00	.14	5313.00	6.54	226.65	54.8
XSECTION	30	RUNOFF	.27	7	2	.10	.0	2.70	24.00	.64	---	6.23	91.54	334.1
XSECTION	30	ADDHYD	4.41	7	2	.10	.0	2.70	24.00	.17	5313.25	6.50	272.46	61.7
XSECTION	34	RUNOFF	.18	7	2	.10	.0	2.70	24.00	.52	---	6.15	56.05	311.4
XSECTION	34	ADDHYD	4.59	7	2	.10	.0	2.70	24.00	.19	5393.63	6.47	290.11	63.2
STRUCTURE	2	RESVOR	4.59	7	2	.10	.0	2.70	24.00	.19	5313.57	6.57	279.45	60.8
XSECTION	28	REACH	4.59	7	2	.10	.0	2.70	24.00	.19	5252.08	6.86	229.78	50.0
XSECTION	28	RUNOFF	.19	7	2	.10	.0	2.70	24.00	.50	---	6.58	26.82	139.7
XSECTION	28	ADDHYD	4.78	7	2	.10	.0	2.70	24.00	.20	5252.19	6.83	252.46	52.8
STRUCTURE	1	RESVOR	4.78	7	2	.10	.0	2.70	24.00	.20	5282.27	6.87	251.40	52.5
XSECTION	16	RUNOFF	.30	7	2	.10	.0	2.70	24.00	.59	---	6.24	85.75	285.8

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.)

XSECTION	26	RUNOFF	.41	7	2	.10	.0	2.70	24.00	.75	---	6.14	202.08	494.1
XSECTION	26	ADDHYD	.72	7	2	.10	.0	2.70	24.00	.73	5493.45	6.17	221.46	308.4
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	2.70	24.00	.02	5501.14	24.60?	.52?	.7
XSECTION	24	REACH	.72	7	2	.10	.0	2.70	24.00	.02	5420.02	25.40?	.51?	.7
XSECTION	24	RUNOFF	.49	7	2	.10	.0	2.70	24.00	.82	---	6.20	227.20	468.4

XSECTION	24	ADDHYD	1.20	7	2	.10	.0	2.70	24.00	.34	5423.92	6.20	227.20	188.9
XSECTION	12	REACH	1.20	7	2	.10	.0	2.70	24.00	.34	5305.00	6.41	183.32	152.4
XSECTION	12	RUNOFF	.66	7	2	.10	.0	2.70	24.00	1.04	---	6.14	467.83	712.1
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	2.70	24.00	.59	5309.22	6.18	569.43	306.1

ALTERNATE 1 STORM 5

XSECTION	58	RUNOFF	.74	7	2	.10	.0	2.30	24.00	.40	---	6.21	151.83	204.9
XSECTION	60	RUNOFF	.67	7	2	.10	.0	2.30	24.00	.47	---	6.23	158.30	237.0
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	2.30	24.00	.44	5685.44	6.22	309.53	219.7
XSECTION	62	RUNOFF	.27	7	2	.10	.0	2.30	24.00	.35	---	6.26	39.20	146.3
XSECTION	62	ADDHYD	1.68	7	2	.10	.0	2.30	24.00	.42	5704.56	6.22	348.24	207.7

XSECTION	50	REACH	1.68	7	2	.10	.0	2.30	24.00	.42	5494.93	6.61	207.24	123.6
XSECTION	50	RUNOFF	.26	7	2	.10	.0	2.30	24.00	1.11	---	6.30	142.84	555.8
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	2.30	24.00	.51	5496.00	6.51	309.21	159.9
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	2.30	24.00	1.36	---	6.07	1467.49	1091.9
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	2.30	24.00	.86	5499.84	6.08	1575.32	480.6

XSECTION	38	REACH	3.28	7	2	.10	.0	2.30	24.00	.86	5476.71	6.20	1520.90	464.0
XSECTION	38	RUNOFF	.24	7	2	.10	.0	2.30	24.00	.58	---	6.23	73.85	302.6
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	2.30	24.00	.84	5477.42	6.20	1594.04	452.6
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	2.30	24.00	.02	5471.40	24.90?	1.90?	.5
XSECTION	36	REACH	3.52	7	2	.10	.0	2.30	24.00	.02	5420.06	25.40?	1.89?	.5

XSECTION	36	RUNOFF	.18	7	2	.10	.0	2.30	24.00	.55	---	6.19	57.65	313.3
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	2.30	24.00	.04	5421.38	6.19	57.65	15.6
XSECTION	32	REACH	3.71	7	2	.10	.0	2.30	24.00	.04	5360.98	6.52	40.17	10.8
XSECTION	32	RUNOFF	.43	7	2	.10	.0	2.30	24.00	.61	---	6.22	142.70	329.6
XSECTION	32	ADDHYD	4.14	7	2	.10	.0	2.30	24.00	.10	5362.85	6.27	160.25	38.7

STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	2.30	24.00	.10	5361.78	6.27	160.27	38.7
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TR20 XEQ 01-03-00 14:13	SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW	JOB 1	SUMMARY
REV PC 09/83(.2)	DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT		PAGE 103

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 5

XSECTION	30	REACH	4.14	7	2	.10	.0	2.30	24.00	.10	5312.50	6.48	136.14	32.9
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XSECTION	30	RUNOFF	.27	7	2	.10	.0	2.30	24.00	.43	---	6.24	56.66	206.8
XSECTION	30	ADDHYD	4.41	7	2	.10	.0	2.30	24.00	.12	5312.71	6.41	175.42	39.8
XSECTION	34	RUNOFF	.18	7	2	.10	.0	2.30	24.00	.33	---	6.17	31.88	177.1
XSECTION	34	ADDHYD	4.59	7	2	.10	.0	2.30	24.00	.13	5392.94	6.37	190.74	41.5
STRUCTURE	2	RESVOR	4.59	7	2	.10	.0	2.30	24.00	.13	5312.58	6.48	182.96	39.8
XSECTION	28	REACH	4.59	7	2	.10	.0	2.30	24.00	.13	5251.70	6.93	143.85	31.3
XSECTION	28	RUNOFF	.19	7	2	.10	.0	2.30	24.00	.32	---	6.61	15.11	78.7
XSECTION	28	ADDHYD	4.78	7	2	.10	.0	2.30	24.00	.14	5251.75	6.90	155.92	32.6
STRUCTURE	1	RESVOR	4.78	7	2	.10	.0	2.30	24.00	.14	5281.62	6.92	155.85	32.6
XSECTION	16	RUNOFF	.30	7	2	.10	.0	2.30	24.00	.39	---	6.26	50.68	168.9
XSECTION	16	REACH	.30	7	2	.10	.0	2.30	24.00	.39	5250.28	6.75	33.76	112.5
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	2.30	24.00	.39	5322.80	6.98	28.84	96.1
XSECTION	14	RUNOFF	.76	7	2	.10	.0	2.30	24.00	.65	---	6.22	270.21	355.1
XSECTION	48	RUNOFF	.31	7	2	.10	.0	2.30	24.00	.47	---	6.38	53.88	174.4
XSECTION	26	REACH	.31	7	2	.10	.0	2.30	24.00	.47	5491.20	6.62	45.62	147.6
XSECTION	26	RUNOFF	.41	7	2	.10	.0	2.30	24.00	.52	---	6.15	131.12	320.6
XSECTION	26	ADDHYD	.72	7	2	.10	.0	2.30	24.00	.50	5492.90	6.18	142.84	198.9
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	2.30	24.00	.02	5500.17	24.70?	.36?	.5
XSECTION	24	REACH	.72	7	2	.10	.0	2.30	24.00	.01	5420.01	25.30?	.35?	.5
XSECTION	24	RUNOFF	.49	7	2	.10	.0	2.30	24.00	.58	---	6.22	151.65	312.7
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	2.30	24.00	.24	5423.31	6.22	151.65	126.1
XSECTION	12	REACH	1.20	7	2	.10	.0	2.30	24.00	.24	5304.29	6.43	117.99	98.1
XSECTION	12	RUNOFF	.66	7	2	.10	.0	2.30	24.00	.76	---	6.15	332.30	505.8
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	2.30	24.00	.43	5307.24	6.19	392.40	211.0
ALTERNATE 1 STORM 6														
XSECTION	58	RUNOFF	.74	7	2	.10	.0	1.80	24.00	.19	---	6.23	57.02	76.9
XSECTION	60	RUNOFF	.67	7	2	.10	.0	1.80	24.00	.24	---	6.25	66.13	99.0
XSECTION	60	ADDHYD	1.41	7	2	.10	.0	1.80	24.00	.22	5683.72	6.24	123.76	87.8
XSECTION	62	RUNOFF	.27	7	2	.10	.0	1.80	24.00	.16	---	6.30	12.86	48.0
XSECTION	62	ADDHYD	1.68	7	2	.10	.0	1.80	24.00	.21	5702.97	6.25	136.20	81.2
XSECTION	50	REACH	1.68	7	2	.10	.0	1.80	24.00	.21	5492.73	6.69	71.91	42.9
XSECTION	50	RUNOFF	.26	7	2	.10	.0	1.80	24.00	.73	---	6.31	88.96	346.2
XSECTION	50	ADDHYD	1.93	7	2	.10	.0	1.80	24.00	.28	5494.17	6.49	134.81	69.7
XSECTION	52	RUNOFF	1.34	7	2	.10	.0	1.80	24.00	.93	---	6.08	995.46	740.7
XSECTION	52	ADDHYD	3.28	7	2	.10	.0	1.80	24.00	.55	5496.82	6.09	1055.77	322.1

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TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 SUMMARY
REV PC 09/83(.2) DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT PAGE 104

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	RAIN DRAINAGE AREA (SQ MI)	ANTEC TABLE #	MAIN MOIST COND	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	6											
XSECTION	38	REACH	3.28	7	2	.10	.0	1.80	24.00	.54	5471.62	6.21	1001.99	305.7
XSECTION	38	RUNOFF	.24	7	2	.10	.0	1.80	24.00	.32	---	6.25	35.34	144.8
XSECTION	38	ADDHYD	3.52	7	2	.10	.0	1.80	24.00	.53	5471.96	6.21	1036.70	294.3
STRUCTURE	93	RESVOR	3.52	7	2	.10	.0	1.80	24.00	.01	5467.18	25.00?	1.20?	.3
XSECTION	36	REACH	3.52	7	2	.10	.0	1.80	24.00	.01	5420.04	25.50?	1.19?	.3
XSECTION	36	RUNOFF	.18	7	2	.10	.0	1.80	24.00	.30	---	6.21	27.05	147.0
XSECTION	36	ADDHYD	3.71	7	2	.10	.0	1.80	24.00	.02	5420.68	6.21	27.05	7.3
XSECTION	32	REACH	3.71	7	2	.10	.0	1.80	24.00	.02	5360.44	6.57	16.41	4.4
XSECTION	32	RUNOFF	.43	7	2	.10	.0	1.80	24.00	.34	---	6.24	70.57	163.0
XSECTION	32	ADDHYD	4.14	7	2	.10	.0	1.80	24.00	.06	5361.84	6.28	76.57	18.5
STRUCTURE	7	RESVOR	4.14	7	2	.10	.0	1.80	24.00	.06	5360.85	6.28	76.60	18.5
XSECTION	30	REACH	4.14	7	2	.10	.0	1.80	24.00	.06	5311.45	6.52	61.30	14.8
XSECTION	30	RUNOFF	.27	7	2	.10	.0	1.80	24.00	.22	---	6.27	22.33	81.5
XSECTION	30	ADDHYD	4.41	7	2	.10	.0	1.80	24.00	.07	5311.78	6.45	76.54	17.3
XSECTION	34	RUNOFF	.18	7	2	.10	.0	1.80	24.00	.15	---	6.20	10.15	56.4
XSECTION	34	ADDHYD	4.59	7	2	.10	.0	1.80	24.00	.07	5391.85	6.43	81.41	17.7
STRUCTURE	2	RESVOR	4.59	7	2	.10	.0	1.80	24.00	.07	5311.28	6.46	80.88	17.6
XSECTION	28	REACH	4.59	7	2	.10	.0	1.80	24.00	.07	5250.81	7.00	57.04	12.4
XSECTION	28	RUNOFF	.19	7	2	.10	.0	1.80	24.00	.14	---	6.69	4.69	24.4
XSECTION	28	ADDHYD	4.78	7	2	.10	.0	1.80	24.00	.07	5250.87	6.98	60.91	12.7
STRUCTURE	1	RESVOR	4.78	7	2	.10	.0	1.80	24.00	.07	5280.91	6.99	60.91	12.7
XSECTION	16	RUNOFF	.30	7	2	.10	.0	1.80	24.00	.19	---	6.30	18.51	61.7
XSECTION	16	REACH	.30	7	2	.10	.0	1.80	24.00	.19	5250.10	6.77	10.24	34.1
STRUCTURE	18	RESVOR	.30	7	2	.10	.0	1.80	24.00	.19	5321.09	6.93	9.83	32.8
XSECTION	14	RUNOFF	.76	7	2	.10	.0	1.80	24.00	.37	---	6.24	137.61	180.8
XSECTION	48	RUNOFF	.31	7	2	.10	.0	1.80	24.00	.24	---	6.41	22.63	73.2
XSECTION	26	REACH	.31	7	2	.10	.0	1.80	24.00	.24	5490.58	6.70	17.85	57.8
XSECTION	26	RUNOFF	.41	7	2	.10	.0	1.80	24.00	.28	---	6.18	60.28	147.4
XSECTION	26	ADDHYD	.72	7	2	.10	.0	1.80	24.00	.26	5491.66	6.19	63.84	88.9
STRUCTURE	94	RESVOR	.72	7	2	.10	.0	1.80	24.00	.01	5499.14	24.80?	.19?	.3
XSECTION	24	REACH	.72	7	2	.10	.0	1.80	24.00	.01	5420.01	26.20?	.18?	.2
XSECTION	24	RUNOFF	.49	7	2	.10	.0	1.80	24.00	.32	---	6.24	72.82	150.2
XSECTION	24	ADDHYD	1.20	7	2	.10	.0	1.80	24.00	.13	5422.14	6.24	72.82	60.5
XSECTION	12	REACH	1.20	7	2	.10	.0	1.80	24.00	.13	5302.19	6.47	52.32	43.5
XSECTION	12	RUNOFF	.66	7	2	.10	.0	1.80	24.00	.45	---	6.16	182.68	278.1
XSECTION	12	ADDHYD	1.86	7	2	.10	.0	1.80	24.00	.24	5305.24	6.19	206.05	110.8

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TR20 XEQ 01-03-00 14:13 SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW JOB 1 SUMMARY
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SUMMARY TABLE 2 - SELECTED MODIFIED ATT-KIN REACH ROUTINGS IN ORDER OF STANDARD EXECUTIVE CONTROL INSTRUCTIONS
(A STAR(*) AFTER VOLUME ABOVE BASE(IN) INDICATES A HYDROGRAPH TRUNCATED AT A VALUE EXCEEDING BASE + 10% OF PEAK
A QUESTION MARK(?) AFTER COEFF.(C) INDICATES PARAMETERS OUTSIDE ACCEPTABLE LIMITS, SEE PREVIOUS WARNINGS)

HYDROGRAPH INFORMATION

ROUTING PARAMETERS

PEAK

		OUTFLOW+				VOLUME		MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIME				
XSEC	REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION		LENGTH	RATIO	QPEAK	KIN	STOR-	KINE-
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	FLOW (CFS)	BASE (IN)	INCR (HR)	#	COEFF (X)	POWER (M)	FACTOR (K*)	O/I (Q*)	(K) (SEC)	COEFF (C)	AGE (HR)	MATIC (HR)
ALTERNATE		1	STORM	1															
50	8600	1312	6.2	930	6.5	1180	6.5	0	1.31	.10	1	.994	1.35	.232	.709	975	.31	.20	.28
38	2700	3322	6.1	3283	6.2			0	1.98	.10	1	1.18	1.34	.027	.988	228	.88?	.10	.06
36	3000	5	24.7	5	25.1	180	6.2	0	.04*	.10	1	.759	1.53	.004	.999	1357	.23	.40	.38
32	4200	180	6.2	145	6.4			0	.12	.10	1	.703	1.48	.080	.806	678	.42	.10	.19
30	3400	510	6.3	469	6.4	617	6.4	0	.28	.10	1	1.07	1.35	.060	.920	480	.55	.10	.13
28	4200	552	6.6	504	6.9			0	.37	.10	1	.301	1.45	.087	.913	926	.33	.30	.26
16	3500	207	6.2	167	6.4	---	---	0	1.25	.10	1	.205	1.64	.115	.808	690	.41	.20	.20
26	4300	194	6.3	176	6.5	482	6.2	0	1.40	.10	1	1.29	1.41	.067	.906	542	.50	.20	.15
24	4200	1	24.5	1	25.3			0	.05*	.10	1	.927	1.45	.016	.992	3005	.11	.40	.84
12	5500	473	6.2	402	6.4	1139	6.2	0	.67	.10	1	1.60	1.36	.107	.850	562	.49	.20	.16
ALTERNATE		1	STORM	2															
50	8600	1091	6.2	753	6.5	974	6.5	0	1.11	.10	1	.975	1.36	.240	.690	1019	.30	.20	.30
38	2700	2951	6.1	2910	6.2			0	1.74	.10	1	1.15	1.34	.028	.986	235	.87?	.10	.07
36	3000	4	24.7	4	25.1	153	6.2	0	.04*	.10	1	.759	1.53	.005	.999	1464	.22	.30	.41
32	4200	153	6.2	121	6.4			0	.10	.10	1	.689	1.48	.084	.792	708	.41	.20	.20
30	3400	462	6.2	420	6.4	545	6.4	0	.24	.10	1	1.06	1.35	.067	.908	492	.54	.20	.14

												.297							
+ 28	4200	512	6.5	445	6.8			0	.32	.10	1	1.46	.101	.870	943	.32	.30	.27	
+						493	6.8												
												.204							
+ 16	3500	170	6.2	133	6.4			0	1.06	.10	1	1.65	.124	.786	743	.39	.20	.22	
+						---	---												
												1.27							
+ 26	4300	162	6.3	145	6.5			0	1.20	.10	1	1.42	.068	.898	567	.48	.20	.16	
+						405	6.2												
												.927							
+ 24	4200	1	24.5	1	25.4			0	.04*	.10	1	1.45	.017	.990	3155	.11	.30	.88	
+						401	6.2												
												1.58							
+ 12	5500	401	6.2	338	6.4			0	.57	.10	1	1.36	.111	.842	585	.47	.20	.17	
+						973	6.2												
	ALTERNATE	1	STORM	3															
+												.949							
+ 50	8600	815	6.2	537	6.5			0	.86	.10	1	1.36	.252	.659	1093	.28	.20	.32	
+						721	6.5												
												1.12							
+ 38	2700	2471	6.1	2428	6.2			0	1.43	.10	1	1.35	.030	.982	245	.85?	.10	.07	
+						2580	6.2												
												.759							
+ 36	3000	3	24.8	3	25.2			0	.03*	.10	1	1.53	.005	.999	1568	.21	.20	.44	
+						119	6.2												
												.671							
+ 32	4200	119	6.2	91	6.4			0	.08	.10	1	1.49	.089	.771	756	.38	.20	.22	
+						357	6.2												
												1.05							
+ 30	3400	356	6.2	316	6.4			0	.19	.10	1	1.35	.070	.890	525	.51	.20	.15	
+						412	6.4												
												.282							
+ 28	4200	398	6.5	342	6.8			0	.25	.10	1	1.47	.109	.860	1010	.30	.30	.29	
+						377	6.8												
												.202							
+ 16	3500	124	6.2	95	6.5			0	.81	.10	1	1.65	.140	.762	837	.35	.30	.24	
+						---	---												
												1.25							
+ 26	4300	121	6.3	107	6.6			0	.93	.10	1	1.43	.071	.890	610	.46	.30	.17	
+						308	6.2												
												.927							
+ 24	4200	1	24.6	1	25.3			0	.03*	.10	1	1.45	.020	.987	3403	.10	.00	.95	
+						311	6.2												
												1.55							
+ 12	5500	311	6.2	257	6.4			0	.46	.10	1	1.37	.117	.828	622	.45	.20	.18	
+						763	6.2												
1																			

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

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

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS							PEAK		
OUTFLOW+										VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIME	
ASEC	REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION		LENGTH	RATIO	@PEAK	KIN	STOR-	KINE-
ID	LENGTH (FT)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	PEAK (CFS)	TIME (HR)	FLOW (CFS)	BASE (IN)	INCR (HR)	#	COEFF (X)	POWER (M)	FACTOR (K*)	O/I (Q*)	(K) (SEC)	COEFF (C)	AGE (HR)	MATIC (HR)
ALTERNATE		1	STORM	4															
50	8600	565	6.2	358	6.6	498	6.5	0	.63	.10	1	.920	1.37	.264	.633	1195	.26	.30	.35
38	2700	2010	6.1	1964	6.2			0	1.14	.10	1	1.08	1.35	.033	.977	257	.82?	.10	.07
36	3000	3	24.8	3	25.3	87	6.2	0	.02*	.10	1	.759	1.53	.006	.998	1700	.19	.20	.47
32	4200	87	6.2	64	6.4			0	.06	.10	1	.649	1.51	.094	.741	825	.36	.20	.24
30	3400	257	6.3	223	6.5	272	6.5	0	.14	.10	1	1.04	1.36	.072	.868	568	.48	.10	.16
28	4200	278	6.6	229	6.9			0	.19	.10	1	.263	1.48	.112	.822	1114	.28	.30	.32
16	3500	84	6.2	61	6.5	---	---	0	.59	.10	1	.200	1.65	.159	.731	974	.31	.30	.29
26	4300	85	6.4	74	6.6			0	.69	.10	1	1.21	1.44	.074	.875	666	.43	.20	.19
24	4200	1	24.6	1	25.4	227	6.2	0	.02*	.10	1	.927	1.45	.023	.981	3729	.09	.00	1.04
12	5500	227	6.2	183	6.4			0	.34	.10	1	1.52	1.37	.124	.807	672	.42	.20	.19
ALTERNATE		1	STORM	5															
50	8600	346	6.2	207	6.6	309	6.5	0	.42	.10	1	.874	1.39	.274	.599	1347	.24	.30	.40
38	2700	1570	6.1	1521	6.2			0	.86	.10	1	1.04	1.36	.037	.969	273	.79?	.10	.08
36	3000	2	24.9	2	25.4	58	6.2	0	.02*	.10	1	.759	1.53	.007	.997	1876	.18	.10	.52
32	4200	58	6.2	40	6.5			0	.04	.10	1	.621	1.53	.100	.696	929	.32	.20	.27

+					159	6.3													
										1.02									
+ 30	3400	159	6.3	136	6.5			0	.10	.10	1	1.36	.069	.853	640	.44	.20	.18	
+					175	6.4													
												.245							
+ 28	4200	183	6.5	144	6.9			0	.13	.10	1	1.50	.121	.787	1251	.25	.30	.36	
+					156	6.9													
												.198							
+ 16	3500	50	6.3	33	6.7			0	.39	.10	1	1.66	.186	.667	1190	.26	.20	.36	
+					---	---													
												1.16							
+ 26	4300	54	6.4	46	6.6			0	.47	.10	1	1.46	.077	.847	751	.39	.20	.21	
+					142	6.2													
												.927							
+ 24	4200	0	24.7	0	25.3			0	.02*	.10	1	1.45	.028	.968	4184	.08	.00	1.17	
+					151	6.2													
												1.49							
+ 12	5500	151	6.2	117	6.4			0	.24	.10	1	1.38	.131	.776	742	.39	.20	.21	
+					392	6.2													
	ALTERNATE	1	STORM	6															
+																			
												.783							
+ 50	8600	132	6.2	72	6.7			0	.21	.10	2	1.42	.260	.545	1680	.19	.40	.51	
+					135	6.5													
												.980							
+ 38	2700	1054	6.1	1000	6.2			0	.55	.10	1	1.37	.045	.949	301	.75?	.10	.08	
+					1035	6.2													
												.759							
+ 36	3000	1	25.0	1	25.5			0	.01*	.10	1	1.53	.009	.995	2202	.15	.00	.61	
+					27	6.2													
												.613							
+ 32	4200	27	6.2	16	6.6			0	.02	.10	1	1.53	.110	.605	1199	.26	.30	.36	
+					76	6.3													
												.995							
+ 30	3400	76	6.3	61	6.5			0	.06	.10	1	1.37	.071	.800	767	.38	.20	.22	
+					76	6.4													
												.219							
+ 28	4200	80	6.5	57	7.0			0	.07	.10	1	1.54	.126	.710	1578	.20	.40	.46	
+					61	7.0													
												.198							
+ 16	3500	19	6.3	10	6.8			0	.19	.10	1	1.66	.231	.552	1766	.18	.40	.55	
+					---	---													
												1.16							
+ 26	4300	23	6.4	18	6.7			0	.24	.10	1	1.47	.085	.790	985	.31	.30	.28	
+					64	6.2													
												.927							
+ 24	4200	0	24.8	0	26.2			0	.01*	.10	1	1.45	.039	.928	5115	.07	.00	1.44	
+					72	6.2													
1																			

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

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

HYDROGRAPH INFORMATION										ROUTING PARAMETERS							PEAK			
OUTFLOW+										VOLUME	MAIN	ITER-	Q AND A		PEAK	S/Q	ATT-	TRAVEL TIME		
XSEC REACH	INFLOW		OUTFLOW		INTERV.AREA		BASE-	ABOVE	TIME	ATION	EQUATION	LENGTH	RATIO	@PEAK	KIN	STOR-	KINE-			
ID	LENGTH	PEAK	TIME	PEAK	TIME	PEAK	TIME	FLOW	BASE	INCR	#	COEFF	POWER	FACTOR	O/I	(K)	COEFF	AGE	MATIC	
	(FT)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(HR)	(CFS)	(IN)	(HR)		(X)	(M)	(K*)	(Q*)	(SEC)	(C)	(HR)	(HR)	
ALTERNATE		1	STORM	6																
12	5500	72	6.2	52	6.5			0	.13	.10	1	1.43	1.40	.138	.727	892	.34	.30	.26	
						206	6.2													

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
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SUMMARY TABLE 3 - DISCHARGE (CFS) AT XSECTIONS AND STRUCTURES FOR ALL STORMS AND ALTERNATES

(SECTION/ STRUCTURE		DRAINAGE AREA	STORM NUMBERS.....					
ID	(SQ MI)		1	2	3	4	5	6
STRUCTURE 94	.72							
ALTERNATE 1			1.05	.90	.70	.52	.36	.19
STRUCTURE 93	3.52							
ALTERNATE 1			4.82	3.87	3.18	2.52	1.90	1.20
STRUCTURE 18	.30							
ALTERNATE 1			80.84	74.32	61.60	47.27	28.84	9.83
STRUCTURE 7	4.14							
ALTERNATE 1			515.10	469.96	362.97	260.36	160.27	76.60
STRUCTURE 2	4.59							
ALTERNATE 1			553.81	512.19	397.57	279.45	182.96	80.88
STRUCTURE 1	4.78							
ALTERNATE 1			554.46	490.44	374.37	251.40	155.85	60.91
XSECTION 12	1.86							
ALTERNATE 1			1145.51	977.85	765.76	569.43	392.40	206.05
XSECTION 14	.76							
ALTERNATE 1			794.96	679.14	532.01	394.90	270.21	137.61
XSECTION 16	.30							

ALTERNATE	1	168.11	135.23	95.17	61.25	33.76	10.24
0 XSECTION	24	1.20					
+							
ALTERNATE	1	473.97	402.06	311.18	227.20	151.65	72.82
0 XSECTION	26	.72					
+							
ALTERNATE	1	489.95	410.40	311.29	221.46	142.84	63.84
0 XSECTION	28	4.78					
+							
ALTERNATE	1	559.93	494.15	377.30	252.46	155.92	60.91
0 XSECTION	30	4.41					
+							
ALTERNATE	1	622.09	549.95	413.55	272.46	175.42	76.54
0 XSECTION	32	4.14					
+							
ALTERNATE	1	517.80	469.95	361.27	261.48	160.25	76.57
1							

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SOUTH DBPS - TR20 RUN 24 HR. 100/50/25 YR. STORM - JJW
DEVELOPED CONDITIONS - ALT 3 DET & STR UPGRD : P3S2_OUT.TXT

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	3	4	5	6
0 XSECTION	34	4.59					
+							
ALTERNATE	1	700.14	614.42	459.84	290.11	190.74	81.41
0 XSECTION	36	3.71					
+							
ALTERNATE	1	184.24	155.82	120.06	87.11	57.65	27.05
0 XSECTION	38	3.52					
+							
ALTERNATE	1	3515.23	3107.21	2580.08	2074.55	1594.04	1036.70
0 XSECTION	48	.31					
+							
ALTERNATE	1	196.15	163.38	122.66	85.56	53.88	22.63
0 XSECTION	50	1.93					
+							
ALTERNATE	1	1181.56	974.75	721.43	497.83	309.21	134.81
0 XSECTION	52	3.28					
+							
ALTERNATE	1	3329.70	2959.33	2479.59	2017.48	1575.32	1055.77
0 XSECTION	58	.74					
+							
ALTERNATE	1	588.29	487.39	362.17	249.43	151.83	57.02
0 XSECTION	60	1.41					
+							
ALTERNATE	1	1143.57	952.25	713.80	497.97	309.53	123.76
0 XSECTION	62	1.68					
+							
ALTERNATE	1	1314.61	1092.02	815.19	565.32	348.24	136.20

1END OF 1 JOBS IN THIS RUN