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HYDROLOGY

BULLDOG FLOODWAY

12/83

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COMPUTATION SHEET
SCS-ENG-5224
Rev. 8-69

STATE: Ariz — Buckhorn Mesa W/S

BY: Hem — DATE: 4/23/85 — CHECKED BY: — DATE:

SUBJECT: Bulldog Wash - Peak Discharge Summary
USING ESTI. "NORMAL" Drainage Areas for each Inlet.

Subarea or X-Section (No.)	2-YEAR 24-Hour (CFS)	10-YEAR 24-Hour (CFS)	100-YEAR 24-Hour (CFS)
4A	30	163	397
1	135	265	496
4B	39	215	525
2	173	480	1019
4C	17	69	155
3	188	542	1160
4D	5	29	71
4	188	543	1162
4E	32	143	327
5	216	670	1459
4F	4	23	56
6	216	672	1465
4G	58	265	611
7	273	932	2066
4H	3	15	37
8	273	932	2067
5A	310	1109	2348
9	552	1963	4272
5B	8	61	157
10	556	1998	4387
5C	2	15	36
11	555	1997	4384
6A	32	149	345
12	582	2124	4688
6B	8	51	126
13	580	2125	4692
6C	75	331	753
14	653	2444	5427

4A - Subarea No. and Discharges are for individual Subareas and can be used for Inlet Design

1 - X-Section No. and Shows Accumulative Discharges along the Floodway.

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COMPUTATION SHEET
SCS-ENG-522A
Rev. 8-69

STATE ARIZ. Buckhorn MESC W/S
BY Hem DATE 4/24/85 CHECKED
SUBJECT Building Wash - Peak Discharge Summary
USING "MAXIMUM" Drainage Areas for Inlets 4A, 4B, 4C, 4E, 4G & 5

Subarea or X-Section (No.)	2-year 24-Hour (CFS)	10-year 24-Hour (CFS)	100-year 24-Hour (CFS)
✓ 4A (1)	67	332	785
✓ 4B (2)	74	370	874
✓ 4C (3)	50	208	464
4D (4)	5	29	71
✓ 4E (5)	56	231	516
4F (6)	4	23	56
✓ 4G (7)	101	427	960
4H (8)	3	15	37
✓ 5A (9)	348	1242	2629
5B (10)	8	61	157
5C (11)	2	15	36
6A (12)	32	149	345
6B (13)	8	51	126
6C (14)	75	331	753

4A - Subarea No. and Discharges are for individual Subareas and can be used for Inlet Design

(1) - X-Section No. and Shows Accumulative Discharges along the Floodway. Should Not be USED in this Run

ARIZ

Buckhorn Mesa W/S

Hem 12/22/83

Bulldog Wash - Peak Discharge Summary

1010 See Rev Summary sheet dated 4/23/85

Subarea or X-Section No.	2-Year 24-Hour (CFS)		10-Year 24-Hour (CFS)		100-Year 24-Hour (CFS)	
4A	3	30	20	163	49	397
(1)	108	135	123	265	150	496
4B	9	39	60	215	150	525
(2)	117	173	183	480	300	1019
4C	60	17	327	69	794	155
(3)	170	188	474	542	1021	1160
4D	5	5	29	29	71	71
(4)	171	188	475	543	1032	1162
4E	23	32	134	143	332	327
(5)	190	216	605	670	1352	1459
4F	3	4	18	23	45	56
(6)	191	216	611	672	1370	1465
4G	84	58	357	265	803	611
(7)	275	273	957	932	2142	2066
4H	3	3	15	15	36	37
(8)	275	273	958	932	2144	2067
5A	266	310	963	1109	2043	2348
(9)	524	552	1887	1963	4135	4272
5B	9	8	69	61	177	157
(10)	529	556	1928	1996	4268	4387
5C	3	2	20	15	47	36
(11)	527	555	1922	1997	4250	4384
6A		32		149		345
(12)		582		2124		4688
6B		8		51		126
(13)		580		2125		4692
6C		75		331		753
(14)		653		2444		5427

(1) = X-Section No. and Shows Accumulative Discharges along the Floodway

4A = Subarea No. and Discharges are for Individual Subareas and can be used for Inlet Design

4/23/85
Hem

Buckhorn Mesa W/S
Bulldog Wash F'/way
Drainage Areas

The drainage area delineations for the Bulldog Wash Floodway Inlet Hydrology were revised on 4/17/85 based on 1" = 1200' 1984 Aerial photo of the area. The photo was obtained as part of a flood study for the storm of July 17-18, 1984 on the Buckhorn Mesa W/S. The alignment of the northwest end of the Apache Junction FIRS was also revised over that used in the Signal Butte FIRS Hydrology Study completed in 1980 & 1981. This added additional Drainage Area to the floodway. The delineation was made on the 1984 photo (See copy which follows); then was transferred to an ortho photo quad, and finally to the Apache Junction USGS quad sheet (7½ min, Scale 1:24000). This latter map was used to planimeter the respective sub areas.

In addition to the small area added due to the Apache Junction FIRS realignment, Subarea 6 as used in the Signal Butte FIRS analysis was added to the Western end of the floodway. The total area was estimated at 5.72 sq miles. This compares with a total of 5.68 sq miles used in the Signal Butte FIRS analysis which included Subareas 4, 5, 6, A and B.

The total area contributing to individual inlets was based on a division of flows from subareas X, Y & Z. The flow division is shown on the following map and was based on field observations and by studying the relative size of existing channels as viewed on the 1"=1200' aerial photo.

The following tabulation shows the minimum, normal and maximum drainage area contributing to each inlet, if they are subject to discharges from the three subareas (X, Y & Z) designated above. The "normal" drainage areas were used to estimate the peak discharges for the design of the roadway itself, and peaks estimated using the "maximum" contributing drainage areas were used to estimate the maximum depth of inlet needed at the various locations.

COMPUTATION SHEET
SCS-ENG-522A
Rev 8-69

STATE: AR12 | Buckhorn Mesa WIS
BY: Hem | DATE: 4/17/85 | CHECKED: | DATE:
SUBJECT: Subdraining Areas, Building wash F/way | 1 | 2

Subarea No.	D.A. Mi^2	Remarks
4A	0.15	Min. D.A to Inlet 4A
X	0.58	
Y	0.16	
✓ 4A+.5X+.2Y	0.47	Normal D.A. to Inlet 4A
4A+X+Y	0.89	Max. D.A. to Inlet 4A
4B	0.25	Min. D.A to Inlet 4B
✓ 4B+.5X+.5Y	0.62	Normal D.A to Inlet 4B
4B+X+Y	0.99	Max. D.A. to Inlet 4B
4C	0.07	Min D.A. to Inlet 4C
✓ 4C+0.2[(.65)(4E)+Y]	0.15	Normal D.A to Inlet 4C
4C+(.65)(4E)+Y	0.45	Max D.A to Inlet 4C
✓ 4D	0.06	Tot. D.A. to Inlet 4D
4E	0.34	
✓ (.35)4E+0.8[(.65)(4E)+.3Y)]	0.33	Normal D.A. to Inlet 4E

COMPUTATION SHEET
SCS ENG-522A
Rev 8-69

STATE: Ariz PROJECT: Buckhorn Mesa W/S

BY: Hm DATE: 4/17/85 CHECKED BY: DATE:

SUBJECT: Subdrainage Areas, Building Wash Floody SHEET 2 OF 2

	Subarea No.	D.A. (Mi^2)	
	4E+4Y	0.50	MAX D.A to Inlet 4E
✓	4F	0.05	TOT. D.A. to Inlet 4F
	4G	0.45	MIN D.A to Inlet 4G
	Z	0.59	
✓	4G+0.4Z	0.69	NORMAL D.A to Inlet 4G
	4G+Z	1.04	MAX D.A to Inlet 4G
✓	4H	0.03	TOT. D.A to Inlet 4H
	5A	1.65	MIN D.A to Inlet 5A
✓	5A+0.6Z	2.00	Normal D.A to Inlet 5A
	5A+Z	2.24	MAX D.A to Inlet 5A
✓	5B	0.17	TOT. D.A to Inlet 5B
✓	5C	0.03	TOT. D.A. to Inlet 5C
✓	6A	0.32	Tot. D.A to Inlet 6A
✓	6B	0.11	Tot. D.A to Inlet 6B
✓	6C	0.71	Tot. D.A to Inlet 6C
		5.72 Mi^2	(Tot. Building wash D.A.)

COMPUTATION SHEET
SCS-ENG-522A
Rev. 8-69

STATE: AR, 2 | PROJECT: BUCKHORN MESA W/S
BY: Am | DATE: 4/15/85 | CHECKED BY: | DATE: | JOB NO.:
SUBJECT: Subdrainage Areas Building wash F'Way (Small Block planimeter) Map Scale 1:24000 | SHEET 1 OF 3

Subarea 4A

47.52	48.55	49.73	50.73	
46.43	47.52	48.55	49.73	$1.08^{\square''} \times .1435 \frac{mi^2}{in^2} = 0.15$
1.09	1.03	1.18	1.00	

Subarea 4B

52.45	54.21	55.91	
50.73	52.45	54.21	$1.72^{\square''} \times .1435 = .25\ mi^2$
1.72	1.74	1.70	

Subarea X

56.85	60.92	64.92	$4.05^{\square''} \times .1435 = 0.58\ mi^2$
52.78	56.85	60.92	
4.07	4.07	4.00	

Subarea Y

66.03	67.17	68.27	$1.13^{\square''} \times .1435 = 0.16\ mi^2$
64.92	66.03	67.17	
1.11	1.14	1.10	

Subarea 4C

74.70	~~75.25~~	75.73	6.77	
74.33	~~74.70~~	75.25	6.31	$0.47^{\square''} \times .1435 = 0.07\ mi^2$
0.47	~~0.55~~	0.48	0.46	

Subarea 4D

7.22	~~7.58~~	8.00	8.44	
6.77	~~7.22~~	7.58	8.00	$0.44^{\square''} \times .1435 = 0.06\ mi^2$
0.45	~~0.36~~	0.42	0.44	

Subarea 4E

10.83	~~13.33~~	15.74	18.18	
8.44	~~10.83~~	13.33	15.74	$2.41^{\square''} \times .1435 = 0.34\ mi^2$
2.39	~~2.50~~	2.41	2.44	

COMPUTATION SHEET
SCS ENG-5224
Rev 8-69

STATE Ariz PROJECT Buckhorn Mesa W/S
BY Hem DATE 4/15/85 CHECKED BY DATE SHEET 2 3
SUBJECT Subdrainage Areas, Building Wash F/Way

Subarea 4F

8.56	8.93	9.33	
8.20	8.56	8.93	$0.37^{\square''} \times .1435 = 0.05\ Mi^2$
0.36	0.37	0.40	

Subarea 4G

22.45	25.58	28.70	
19.33	22.45	25.58	$3.12^{\square''} \times .1435 = 0.45\ Mi^2$
3.12	3.13	3.12	

Subarea 4H

1.66	1.83	2.02	
1.48	1.66	1.83	$0.18^{\square''} \times .1435 = 0.03\ Mi^2$
0.18	0.17	0.19	

Subarea Z

33.84	37.98	42.05	46.23	
29.77	33.84	37.98	42.05	$4.11^{\square''} \times .1435 = 0.59\ Mi^2$
4.07	4.14	4.07	4.18	

Subarea 5A

64.15	75.64	87.21	
52.63	64.15	75.64	$11.53^{\square''} \times .1435 = 1.65\ Mi^2$
11.52	11.49	11.57	

Subarea 5B

88.46	89.59	90.78	92.00	
87.21	88.46	89.59	90.78	$1.20^{\square''} \times .1435 = 0.17\ Mi^2$
1.25	1.13	1.19	1.22	

Arr2 Buckhorn Mus WS

Hem 4/15/85

Subdrainage Areas, Building Wash Flwy 3 3

Subarea 5C

7.81	8.04	8.30	
7.54	7.81	8.04	$0.25^{\square''} \times .1435 = 0.03$ Mi²
0.27	0.23	0.26	

Subarea 6A

10.55	12.78	15.06	
8.30	10.55	12.78	$2.25^{\square''} \times .1435 = 0.32$ Mi²
2.25	2.23	2.28	

Subarea 6B

16.89	17.65	18.40	
16.13	16.89	17.65	$0.76^{\square''} \times .1435 = 0.11$ Mi²
0.76	0.76	0.75	

Subarea 6C

23.39	28.28	33.33	38.23	
18.40	23.39	28.28	33.33	$4.96^{\square''} \times .1435 = 0.71$ Mi²
4.99	4.89	5.05	4.90	

5.72 Mi²

COMPUTATION SHEET
SCS-ENG-22 REV. 3-69

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GPO : 1968—O-337-998

STATE		PROJECT		
ARIZ		B		
SUBJECT Hem	DATE 12/20/83	CHECKED BY	DATE	JOB NO.
				SHEET ____ OF ____

Subarea No.	Drainage Area Mi²	
4A	0.04	VOID See Revised Calc dated 4/17/85
4B	0.14	
4C	0.94	(Includes Subarea "A")
4D	0.06	
4E	0.35	
4F	0.04	
4G	0.88	
4H	0.03	
5A	1.77	(Includes Subarea "B")
5B	0.19	
5C	0.04	
Area Bet ℄ Alignments	0.06	
	4.54	

DATA FROM SIGNAL BUTTE FRS DRAINAGE AREA

4	2.19	
5	1.87	
A	0.35	
B	0.13	
	4.54	SAY OK

COMPUTATION SHEET
SCS-ENG-522 REV. 3-59

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GPO : 1968—O-337-998

STATE		PROJECT		
AR12		Buckhorn Mesa WS		
Hem	DATE 12/20/83	CHECKED BY	DATE	JOB NO.

SUBJECT Building Wash, Drainage Area Calc — SHEET 1 OF

Map scale 1:24,000

VOID
See new calc 4/5/84

Subarea 4A

1	4	2	3
2.08	3.16	2.63	2.90
1.85	2.90	2.45	2.63
.23	.26	.18	.27

= 0.24 X 0.1435 = 0.04 Mi²

Sub area 4B

4.12	5.15	6.10	7.08
3.16	4.12	5.15	6.10
.96	1.03	0.95	0.98

= 0.96 X .1435 = 0.14 Mi²

Sub area 4C

5.21	9.34	13.45
1.10	5.21	9.34
4.11	4.13	4.11

= 4.12 D" X .1435 = 0.59 Mi²
Subarea A = 0.35
(See Subarea Buhle D.A. DATA) 0.94

Sub area 4D

1.60	2.05	2.50
1.15	1.60	2.05
0.45	0.45	0.45

= 0.45 D" X .1435 = 0.06 Mi²

Sub area 4E

3.62	6.08	8.48	10.90
1.12	3.62	6.08	8.48
2.50	2.46	2.40	2.42

= 2.45 D X .1435 = 0.35 Mi²

Sub area 4F

1.48	1.88	2.17	2.55	2.85
1.18	1.48	1.88	2.17	2.55
0.30	0.40	0.29	0.38	0.30

= 0.30 D" X .1435 = 0.04 Mi²

Sub area 4G

7.20	13.45	19.48	25.65
1.10	7.20	13.45	19.48
6.10	6.25	6.03	6.17

6.13 D" X .1435 = 0.88 Mi²

31.74	8.22
25.65	2.10
6.09	6.12

Sub area 4H

1.35	1.55	1.75
1.15	1.35	1.55
0.20	0.20	0.20

= 0.20 D" X 0.1435 = 0.03 Mi²

COMPUTATION SHEET
SCS–ENG–522 REV. 3–69

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GPO : 1968—O-337-998

STATE		PROJECT		
Az.		Buckhorn Mesa WS		
Hm	DATE 12/20/83	CHECKED BY	DATE	JOB NO.

SUBJECT Bullock wash Drainage Area Calc
Map Scale 1:24000

SHEET 2 OF

Sub area. 5A (INCLUDES Subarea "B")

	24.93	37.25	49.62
	12.56	24.93	37.25
	12.37	12.32	12.37

12.35 □" X .1435 = 1.77 mi²

Subarea 5B

	50.94	52.19	53.48
	49.62	50.94	52.19
	1.32	1.25	1.29

1.29 □" X .1435 = 0.19 mi²

Subarea 5C

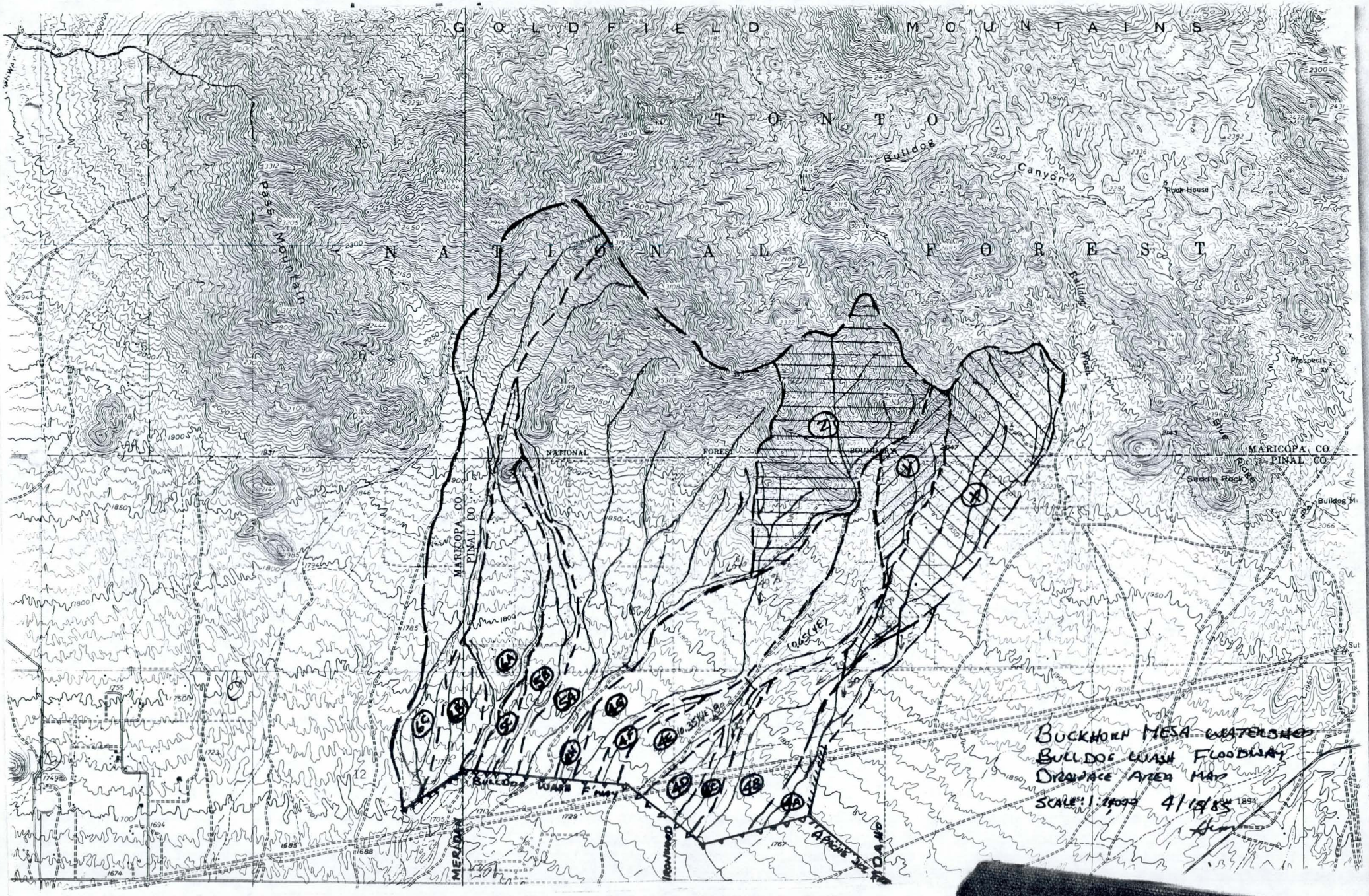
	3.84	4.12	4.37
	3.59	3.84	4.12
	0.25	0.28	0.25

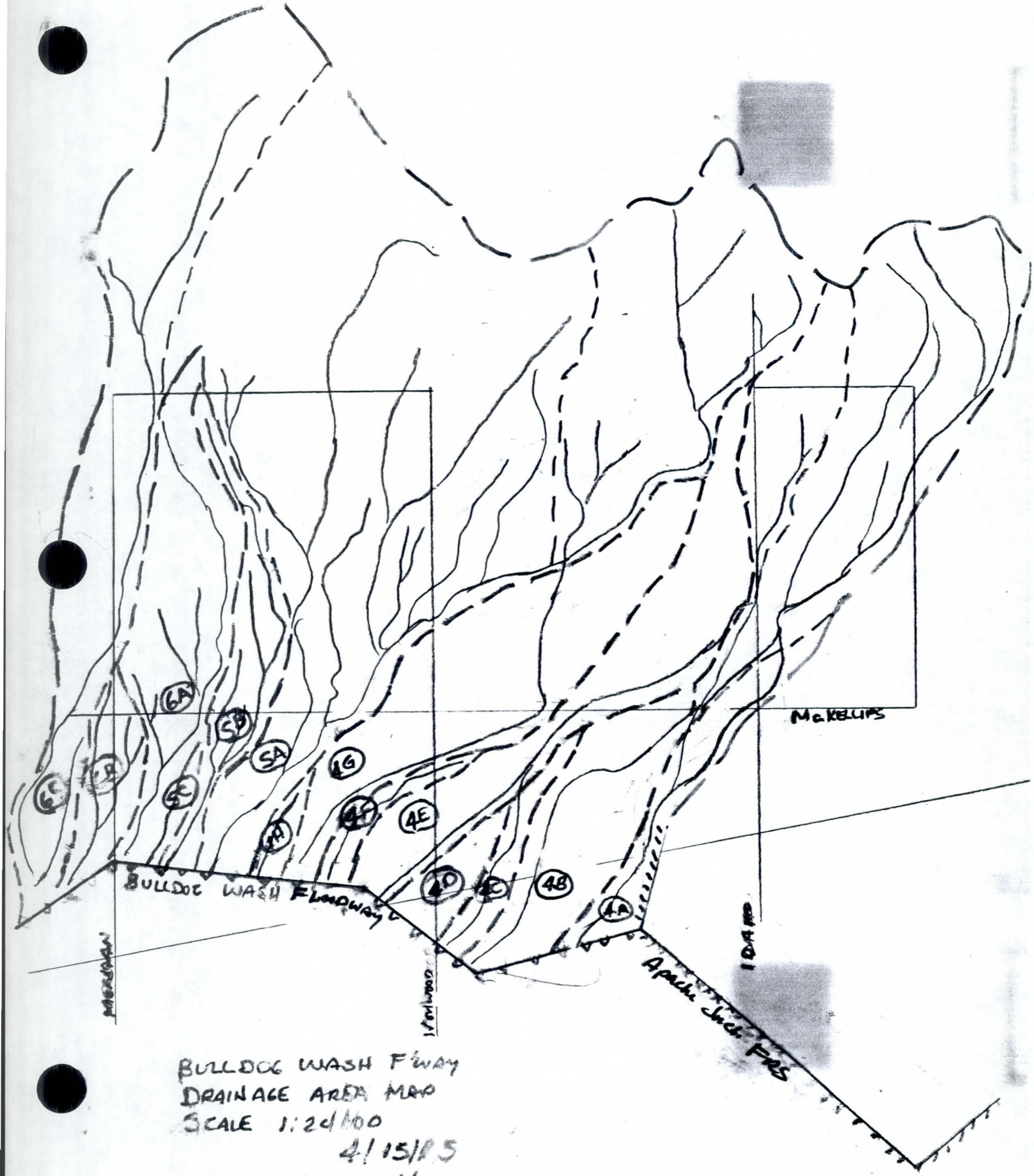
0.26 □" X .1435 = 0.04 mi²

Subarea between & Alignments

	4.70	5.18	5.60	6.02	6.45
	4.37	4.70	5.18	5.60	6.02
	33	0.48	0.42	0.42	0.43

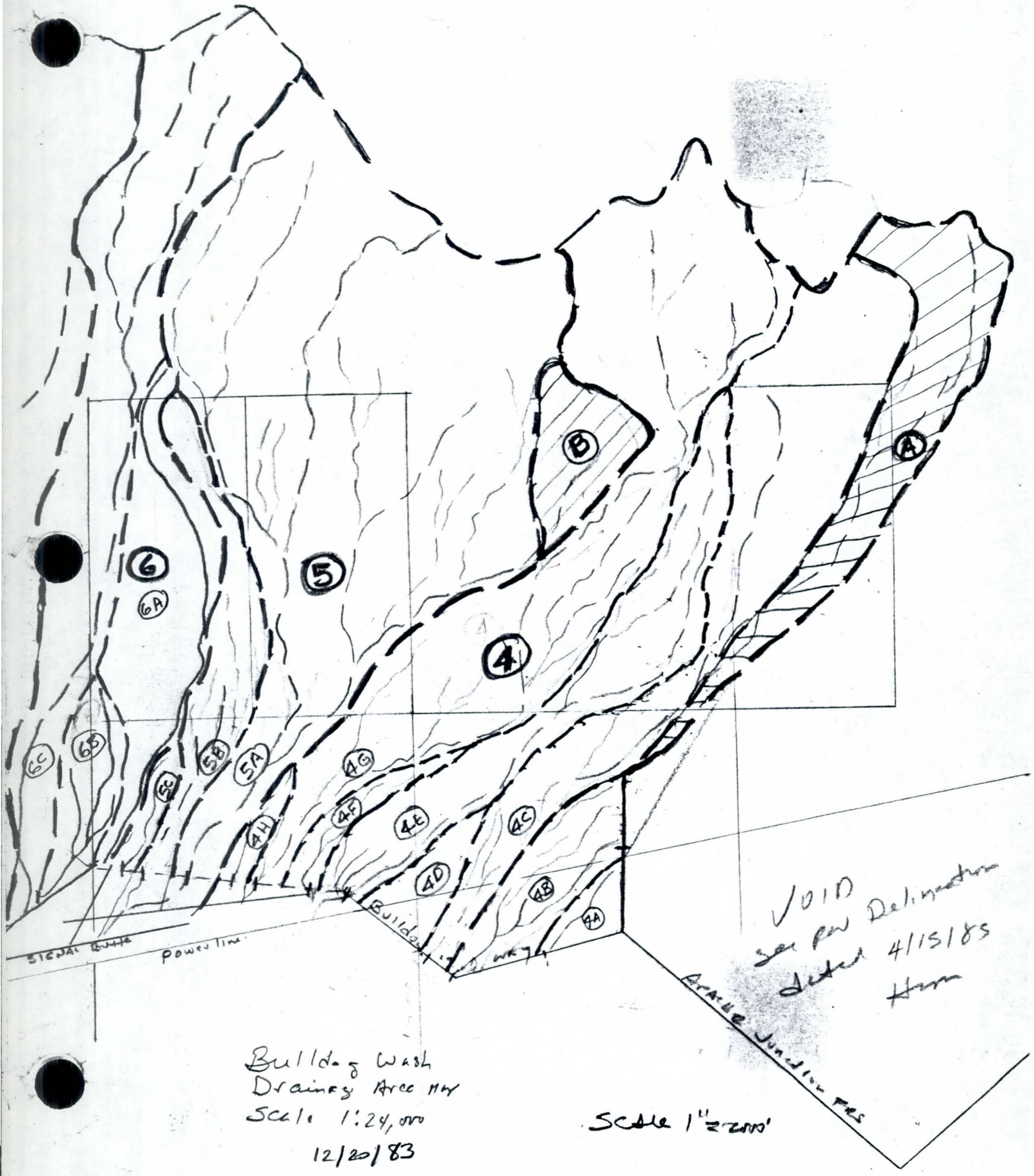
0.43 □" = .06 mi²


GOLDFIELD MOUNTAINS
TONTO
NATIONAL FOREST
Bass Mountain
Bulldog Canyon
Rock House
Bulldog Wash
Prospects
Saddle Rock
MARICOPA CO.
PINAL CO.
BULLDOG WASH FLOODWAY
APACHE JCT.
BUCKHORN MESA WATERSHED
BULLDOG WASH FLOODWAY
DRAINAGE AREA MAP
SCALE: 1:
4/12/85



BULLDOG WASH F'WAY
DRAINAGE AREA MAP
SCALE 1:24000
4/15/85
Hem

McPHILLIPS RD.
IRONWOOD DR
SIGNAL BTTL RD
BROWN RD.
IDAHO



Bulldog Wash
Drainage Area map
Scale 1:24,000
12/20/83

Scale 1" = 2000'

4/22/85

Building Wash

TIMES OF CONC

Times of Conc. by subarea were estimated using average channel velocities calculated as part of the Signal Butte FRS Analysis completed in December 1980. This velocities were calc. using Mannings equation on surveyed X-sections with slopes estimated from 7 1/2-minute Quad sheets. The Tc's so calc were then modified for projected urbanization by modifying for % imperviousness and channel length. See write-up in the Signal Butte FRS Documentation for a further description of the procedures used.

COMPUTATION SHEET
SCS ENG-522A
Rev. 8-69

STATE: ARIZ PROJECT: Buckhorn Mesa W/S
BY: Hm DATE: 4/22/85 CHECKED BY: DATE: SHEET NO.
SUBJECT: TIME OF CONC. Summary
Building Wash Floodway (FOR NORMAL D.A.'S)

Subarea No.	Pres Cond. Tc.	Future Short DW CN	Adj for Chn[1] Length mod	Adj for[2] Impervious	Future Tc
4A	0.61	85	.93	.95	0.54
4B	0.63	85	.93	.95	0.56
4C	0.53	88	.94	.95	0.47
4D	0.11	83	.92	.95	0.10
4E	0.53	87	.93	.95	0.47
4F	0.15	83	.92	.95	0.13
4G	0.66	87	.93	.95	0.58
4H	0.08	83	.92	.95	0.07
5A	0.45	90	.95	.95	0.41
5B	0.38	83	.92	.95	0.33
5C	0.11	83	.92	.95	0.10
6A	0.38	86	.93	.95	0.34
6B	0.14	83	.92	.95	0.12
6C	0.52	87	.93	.95	0.46

[1] Fig 3.4, TR-55 dated Jan 1975 Assuming 15% Chan Modification based on development of 5 Acre Tracts

[2] Fig 3.5 TR-55 Assumming 10% Impervious based on Table 2.2, TR-20

COMPUTATION SHEET
SCS ENG-522A
Rev. 8-69

STATE: Ariz | PROJECT: Buckhorn Mesa W/S
BY: Hm | DATE: 4/18/85 | CHECKED BY: [illegible]
SUBJECT: Bulldog Wash F/Way, Time of Concentration

Subarea No.	Length[1] (ft)	Velocity[2] (ft/sec)	$T_c = \frac{L}{3600V}$	Remarks
4A	15,700	7.1	0.61	Includes Subarea X
4B	16,000	7.1	0.63	Includes Subarea X
4C	13400	7.0	0.53	Include Subarea Y
4D	2600	6.3	0.11	
4E	13400	7.0	0.53	Includes Subarea Y
4F	3500	6.3	0.15	
4G	16,560	7.0	0.66	Includes Subarea Z
4H	1800	6.3	0.08	
5A	14,800	9.1	0.45	Includes Subarea Z
5B	8600	6.3	0.38	
5C	2500	6.3	0.11	
6A	10,200	7.5	0.38	
6B	3700	7.5	0.14	
6C	15,300	8.2	0.52	

1] Length Scaled From 7½ MIN Quad Sheets
2] Ave Vel Based on Data Calc. for Signal Butte FPS Investigations, which Included Bulldog Wash Floodway area.

COMPUTATION SHEET
SCS–ENG–522 REV. 3–69

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GPO : 1968—O-337-998

STATE		PROJECT		
ARIZ		Buckhorn Mesa W/S		
Hem	DATE 12/20/83	CHECKED BY	DATE	JOB NO.

SUBJECT TIME of Concentration Summary
Building Wash Floodway

SHEET ____ OF ____

VOID See RW dated 4/12/85

Subarea No.	Pres Cond Tc	Future Short Dur. CN	Adj for 1/ Chan Length Modification	Adj for 2/ Impervious	Future Tc
4A	0.09	83	.92	.95	0.08
4B	0.19	83	.92	.95	0.17
4C	0.61	85	.93	.95	0.54
4D	0.11	83	.92	.95	0.10
4E	0.45	84	.92	.95	0.39
4F	0.15	83	.92	.95	0.13
4G	0.66	88	.94	.95	0.59
4H	0.09	83	.92	.95	0.08
5A	0.48	90	.94	.95	0.43
5B	0.36	83	.92	.95	0.31
5C	0.10	83	.92	.95	0.09

1/ Fig 3.4, TR-55 Assuming 15% of Chan Modified based on development of 5-Acre Tracts

2/ Fig 3.5, TR-55 Assuming 10% Impervious based on Table 2.2, TR-20.

AR12 Buckhorn Mesa W/S

Hum 12/20/83

Bulldog Wash Floodway Time of Concentration

VOID Date See New Data dated 4/11/85

Subarea No.	Length[1] (Ft)	Velocity[2] (Ft/sec)	$T_c = \frac{L}{3600V}$	
4A	2000	6.3	0.09	
4B	4200	6.3	0.19	
4C	24260	11.0	0.61	Includes Subarea (A)
4D	2500	6.3	0.11	
4E	10,500	6.5	0.45	
4F	3500	6.3	0.15	
4G	21,720	9.1	0.66	
4H	2000	6.3	0.09	
5A	19320	11.2	0.48	Includes Subarea (B)
5B	8200	6.3	0.36	
5C	2200	6.3	0.10	

1) Length Scale From 7½-Minute Quads

2) Avg Vel Based on Data Calc for Signal Butte FPS Investigations which included Bulldog Wash Floodway Area.

4/22/85

Bulldog Wash

Curve No. Calculation

Curve numbers by Subarea were calc using Hydrologic Soil Group Map which follows based on a Desert Brush Cover with a 15% Cover Density. Curve Numbers were modified for Storm Duration, and weighted based on Contributing Drainage Areas and Soil Groups.

COMPUTATION SHEET
SCS-ENG-5221
Rev. 8-69

STATE: Ariz — PROJECT: Buckhorn Mesa W/S

BY: Hem — DATE: 4/22/85 — CHECKED BY: — DATE:

SUBJECT: Curve Numbers by Duration — SHEET: 1 — 2

Bulldog Wash Floodway

Drainage Area No.	Short (1-hr) Duration RCN	6-Hr[1] RCN	24-Hr[1] RCN	10 DAY RCN Table 2-3 TR-60	
4A	83	79	75	58	MIN D.A to Inlet 4A
X	85	81	78	62	
Y	90	86	83	69	
4A+.5X+.2Y	85	81	78 ✓	62	Normal D.A. to Inlet 4A
4A+X+Y	86	82	79	64	MAX D.A to Inlet 4A
4B	84	80	77	61	MIN D.A. to Inlet 4B
4B+.5X+.5Y	85	81	78 ✓	62	Normal D.A. to Inlet 4B
4B+X+Y	86	82	79	64	MAX D.A. to Inlet 4B
4C	87	83	80	65	MIN D.A to Inlet 4C
4C+.2[(.65)(4E)+Y] (.044, .032)	88	84	81 ✓	66	Normal D.A to Inlet 4C
4C+.65(4E)+Y	88	84	81	66	MAX D.A to Inlet 4C
4D	83	79	75 ✓	58	Tot. D.A to Inlet 4D
4E	87	83	80	65	
(.35)(4E)+.8[(.65)(4E)+.3Y] (.112, .18, .04)	87	83	80 ✓	65	Normal D.A to Inlet 4E

COMPUTATION SHEET
SCS-ENG-522A
Rev. 8-69

STATE: ARIZ — Buckhorn Mesa W/S

BY: Hem — DATE: 4/22/85

SUBJECT: CURVE Numbers by Duration — SHEET 2 of 2

Building Wash Floodway

Drainage Area No.	Short (1-hr) Duration RCN	6-Hr RCN	24-Hr RCN	10-Day RCN Table 2-3 TR-60	
4E+Y	88	84	81	66	MAX D.A. to Inlet 4E
4F	83	79	75 ✓	58	Tot. D.A. to Inlet 4F
4G	85	81	78	62	MIN. D.A. to Inlet 4G
Z	91	87	84	71	
4G+0.4Z	87	83	80 ✓	65	Normal D.A. + Inlet 4G
4G+Z	88	84	81	66	MAX D.A to Inlet 4G
4H	83	79	75 ✓	58	Tot. D.A. to Inlet 4H
5A	90	86	83	69	MIN D.A. to Inlet 5A
5A+0.6Z	90	86	83 ✓	69	Normal DA + Inlet 5A
5A+Z	90	86	83	69	MAX D.A to Inlet 5A
5B	83	79	75 ✓	58	Tot. D.A to Inlet 5B
5C	83	79	75 ✓	58	Tot. D.A to Inlet 5C
6A	86	82	79 ✓	64	Tot. D.A. + Inlet 6A
6B	83	79	75 ✓	58	Total D.A. + Inlet 6B
6C	87	83	80 ✓	65	Tot. D.A. + Inlet 6C

,17

STATE Ariz BY Kem DATE 4/24/85 PROJECT Buckhorn Mesa W/S

SUBJECT Building Wash CN Calc. CHECKED BY SHEET 1 of 2

Subarea No.	Hyd Soil Group	Veg Cover Type	% Cover	Short Dur CN	Dr. Area (Mi²)	Product CN x Mi²	Wt. Short Dur. CN
4A	B	Desert Br	15%	83	.15	12.45	83
4B	B	"	"	83	.21	17.43	
	C	"	"	89	.04	3.56	84
					.25	20.99	
X	B	"	"	83	.41	34.03	
	C	"	"	89	.07	6.23	85
	D	"	"	92	.10	9.20	
					.58	49.46	
Y	C	"	"	89	.11	9.79	
	D	"	"	92	.05	4.60	90
					.16	14.39	
Z	C	"	"	89	.12	10.68	
	D	"	"	92	.47	43.24	91
					.59	53.92	
4C	B	"	"	83	.02	1.66	
	C	"	"	89	.05	4.45	87
					.07	6.11	
4D	B	"	"	83	.06	4.98	83
4E	B	"	"	83	.13	10.73	
	C	"	"	89	.21	18.69	87
					.34	29.42	
4F	B	"	"	83	.05	4.15	83

Area 4/22/85 Brumbaugh Mesa W/S

Item Bullfrog Wash CN Calc.

Subarea No.	Hyd Soil Group	Veg Cover Type	% Cover	Short Dur CN	Dr. Area (Mi²)	Product CN × Mi²	Wt. Short Dur CN
4G	B	Desert Br	15%	83	.30	24.90	
	C	"	"	89	.15	13.35	85
					.45	38.25	
4H	B	"	"	83	.03	2.49	83
5A	B	"	"	83	.25	20.75	
	C	"	"	89	.55	48.95	90
	D	"	"	92	.85	78.20	
					1.65	147.90	
5B	B	"	"	83	.17	14.11	83
5C	B	"	"	83	.03	2.49	83
6A	B	"	"	83	.22	18.26	
	D	"	"	92	.10	9.20	86
					.32	27.46	
6B	B	"	"	83	.11	9.13	83
6C	B	"	"	83	.40	33.20	
	D	"	"	92	.31	28.52	87
					.71	61.72	

SHEET 2 2

COMPUTATION SHEET
SCS-ENG-522 REV. 3-69

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GPO: 1968—O-337-998

STATE: Ariz | DATE: 12/29/83 | PROJECT: Burkhart | CHECKED BY: | DATE: | JOB NO.: Misc WS | SHEET ___ OF ___

SUBJECT: Hem Building Wash CN Calc.

Subarea No.	Hyd Soil Group	Veg Cover Type	% Cover	Short Dur CN	Sub Area (Mi²)	Product CN×Mi²	Weight Short Dur CN
4A	B	Desert Br	15	83	0.04	3.32	83
4B	B	"	15	83	0.14	11.62	83
4C	B	"	15	83	0.66	54.78	85
	C	"	15	89	0.15	13.35	
	D	"	15	92	0.13	11.96	
					0.94	80.09	
4D	B	"	15	83	0.60	49.8	83
4E	B	"	15	83	0.29	24.07	84
	C	"	15	89	0.06	5.34	
					0.35	29.41	
4F	B	"	15	83	0.04	3.32	83
4G	B	"	15	83	0.33	27.39	88
	C	"	15	89	0.26	23.14	
	D	"	15	92	0.29	26.68	
					0.88	77.21	
4H	B	"	15	83	0.03	2.49	83
5A	B	"	15	83	.27	22.41	90
	C	"	15	89	.59	52.51	
	D	"	15	92	.91	83.72	
					1.77	158.64	
5B	B	"	15	83	0.19	15.77	83
5C	B	"	15	83	0.04	3.32	83

VOID Pre calc See Dam Hydrology Hem

COMPUTATION SHEET
SCS-ENG-522 REV. 3-69

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
GPO: 1968—O-337-998

STATE		PROJECT		
ARIZ		Buckhorn Mesa WS		
BY	DATE	CHECKED BY	DATE	JOB NO.
Hem	12/20/83			

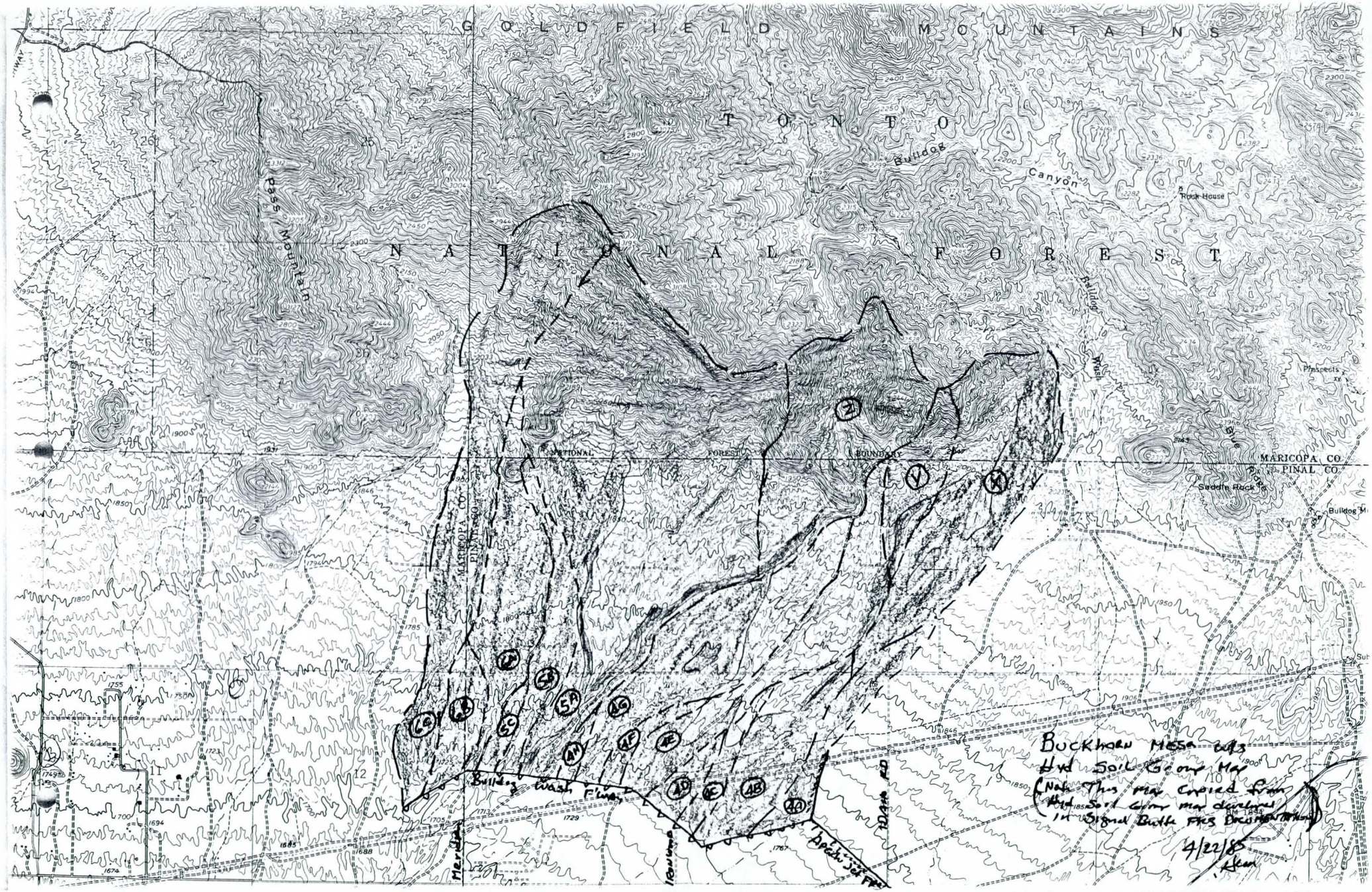
SUBJECT CURVE NUMBERS BY DURATION
BULLDOG WASH FLOODWAY

SHEET ____ OF ____

Drainage Area No.	Short (1-hr) Duration RCN	6-Hr[1] RCN	24-Hr[1] RCN	10-Day RCN Table 2-3 TR-60
4A	83	79	75	58
4B	83	79	75	58
4C	85	81	78	62
4D	83	79	75	58
4E	84	80	77	61
4F	83	79	75	58
4G	88	84	81	66
4H	83	79	75	58
5A	90	86	83	69
5B	83	79	75	58
5C	83	79	75	58

Void see new calc dat 4/21/85

1/ Curve numbers for 6-Hr & 24-Hr Durations are based on Publication by Dr. E. Woodward, SCS Hyd Engr. entitled, "Runoff Curve Numbers for Semi-arid Range & Forest Conditions" as presented to ASAE Society on June 17-20, 1973.


GOLDFIELD MOUNTAINS
TONTO
NATIONAL FOREST
Pass Mountain
Bulldog Canyon
Rock House
Bulldog Wash
Prospects
Silver Spring
Saddle Rock
MARICOPA CO.
PINAL CO.
NATIONAL FOREST BOUNDARY
Bulldog Wash Flows
Bulldog Wash Jeep Trail
Meridian
Bulldog Mt
Buckhorn Mesa 6/93
Hwd Soil Group Map
(Note: This map copied from
Hwd Soil Group map developed
by Signal Butte FRS Department)
4/22/85
Hean

ARIZONA BUCKHORN-MESA WATERSHED

R. McArthur 7/30/79 Hum 11/19/80

PRECIPITATION-FREQUENCY RELATIONSHIP

SOURCE: NOAA ATLAS 2 "PRECIPITATION-FREQUENCY ATLAS OF WESTERN U.S. VOL. VIII ARIZONA

Note! This precip Data is From a record Developed by Robin McArthur And A copy is Filed in Design Note Book for Buck Tr. 12/20/83 Hum

6 HR DURATION POINT PRECIP

FREQUENCY (yrs)	MEAN MAP VALUE (In)	FACTOR	PLOTTED ANNUAL SERIES VALUE (In)	ANNUAL SERIES VALUE USED (In)
100	3.28	1.00	3.28	3.28
50	2.89	1.00	2.89	2.89
25	2.56	1.00	2.56	2.50
10	2.08	0.99	2.06	2.04
5	1.76	0.96	1.69	1.67
2	1.27	0.88	1.12	1.13

24 HR DURATION POINT PRECIP

FREQUENCY (yrs)	MEAN MAP VALUE (In.)	FACTOR	PLOTTED ANNUAL SERIES VALUE (In)	ANNUAL SERIES VALUE USED (In)
100	4.00	1.00	4.00	4.05
50	3.58	1.00	3.58	3.58
25	3.18	1.00	3.18	3.15
10	2.59	0.99	2.56	2.58
5	2.23	0.96	2.15	2.10
2	1.63	0.88	1.43	1.45

AR12 Buckhorn Mesa W/S

~~Hem~~ 12/19/83

Building Wash Inlet Location

SCALE From 1" = 400' ~~Hy Tw~~ Work Plan Layout Sheet For Building Wash Floodway & Apache Junction Floodway ~~dated~~ 8-74

INLET No.	X-Section No. used in TR-20	Δ DIST	APPROX STA.	
			~~100+00~~	102+70
		1350 1370		
4A	①		~~113+50~~	116+40
		~~1639~~ 1700		
4B	②		~~131+89~~	133+40
		540		
4C	③		~~137+29~~	138+80
Not, Subwater 40 May or May not need an Inlet →	④	~~2030~~ 1750		
4E	⑤		~~154+59~~	156+30
		~~2830~~ 600		
4F	⑥		~~157+42~~	162+30
		~~1050~~ 780		
4G	⑦		167+92	170+10
		350		
~~4H~~	⑧		171+42	173+60
		750		
5A	⑨		178+92	181+10
		810		
5B	⑩		187+02	189+20
		~~700~~ 280		
5C	⑪		194+02	~~192+00~~
		440		
6A			196+40	℄ From Design & Section Layout & Surveys
		970		
6B			206+10	
		340		
6C			209+50	

FILENAME = (DES/TR20.BDWH) ADWH ← New File Date: 12/21/83 Time: 15:29: 8

use convep method old TR20

```
JOB        TR20                    FULLPRINT                                                  1A071
TITLE        12/21/83 BULLDOG WASH.DESIGN HYDROLOGY                                           1B072
 6 RUNOFF 1 001        6 0.04 ~~.1~~   ~~75.~~ 72.   ~~0.09~~ .51   1     1  1   1089
 6 REACH  3 002    6   5 ~~1039.~~ 1770.   0.86                      1     1  1   2089
 6 RUNOFF 1 002        6 ~~0.14~~ 0.62   ~~75.~~ 72.   ~~0.17~~ 0.56   1     1  1   3089
 6 ADDHYD 4 002    5 6 7                                             1  D  1  1   4089
 6 REACH  3 003    7   5 540.            0.86                                      5089
 6 RUNOFF 1 003        6 ~~0.94~~ 0.15   ~~78.~~ 81.   ~~0.54~~ 0.47   1     1  1   6089
 6 ADDHYD 4 003    5 6 7                                             1  d  1  1   7089
 6 REACH  3 004    7   5 1000.           0.87                                      8089
 6 RUNOFF 1 004        6 0.06            75.           0.10          1     1  1   9089
 6 ADDHYD 4 004    5 6 7                                             1  b  1  1  10089
 6 REACH  3 005    7   5 1030.           0.87                                     11089
 6 RUNOFF 1 005        6 ~~0.35~~ 0.33   ~~77.~~ 80.   ~~0.39~~ 0.47   1     1  1  12089
 6 ADDHYD 4 005    5 6 7                                             1  C  1  1  13089
 6 REACH  3 006    7   5 ~~203.~~ 420.   0.88                                     14089
 6 RUNOFF 1 006        6 ~~0.04~~ 0.03   75.           0.13          1     1  1  15089
 6 ADDHYD 4 006    5 6 7                                             1  C  1  1  16089
 6 REACH  3 007    7   5 ~~1050.~~ 720.  0.88                                     17089
 6 RUNOFF 1 007        6 ~~0.88~~ 0.69   ~~81.~~ 80.   ~~0.59~~ 0.58   1     1  1  18089
 6 ADDHYD 4 007    5 6 7                                             1  C  1  1  19089
 6 REACH  3 008    7   5 350.            0.90                                     20089
 6 RUNOFF 1 008        6 0.03            75.           ~~0.08~~ 0.07   1     1  1  21089
 6 ADDHYD 4 008    5 6 7                                             1  C  1  1  22089
 6 REACH  3 009    7   5 750.            0.90                                     23089
 6 RUNOFF 1 009        6 ~~1.77~~ 2.00   83.           ~~0.43~~ 0.41   1     1  1  24089
 6 ADDHYD 4 009    5 6 7                                             1  C  1  1  25089
 6 REACH  3 010    7   5 810.            0.91                                     26089
 6 RUNOFF 1 010        6 ~~0.19~~ 0.17   75.           ~~0.31~~ 0.33   1     1  1  27089
 6 ADDHYD 4 010    5 6 7                                             1  C  1  1  28089
 6 REACH  3 011    7   5 ~~700.~~ 280.   0.91                                     29089
 6 RUNOFF 1 011        6 ~~0.04~~ 0.03   75.           ~~0.09~~ 0.10   1     1  1  30089
 6 ADDHYD 4 011    5 6 7                                             1 1 0 1 0 1  31089
   ENDATA                                                                         32070
 7 LIST                                                                           33068
 7 BASFLO 5                105.                                                   34068
 7 INCREM 6                0.10                                                   35068
*7 COMPUT 7 001   014 ~~011~~  0.0        1.45          1.0           2 2 01 01   36068
   ENDCMP 1                                                                       37070
 7 BASFLO 5        014     105.                                                   37A068
 7 COMPUT 7 001   014 ~~011~~  0.0        2.58          1.0           2 2 01 02   38068
   ENDCMP 1                                                                       39070
 7 BASFLO 5        014     105.                                                   39A068
 7 COMPUT 7 001   014 ~~011~~  0.0        4.05          1.0           2 2 01 03   40068
   ENDCMP 1                                                                       41070
   ENDJOB 2                                                                       42070
```

INSERT HERE

```
6 REACH 3 012 7 5 440.      0.91                                   31A
6 RUNOFF 1 012    6 0.32    79.          0.34      1     1  1     31B
6 ADDHYD 4 012 5 6 7                                 1  C  1  1     31C
6 REACH 3 013 7 5 970.      0.91                                   31D
6 RUNOFF 1 013    6 0.11    75.          0.12      1     1  1     31E
6 ADDHYD 4 013 5 6 7                                 1  C  1  1     31F
6 REACH 3 014 7 5 340.      0.91                                   31G
6 RUNOFF 1 014    6 0.71    80.          0.46      1     1  1     31H
6 AD[illegible] 4 014 5 6 7                          [illegible]  1  1     31I
```

Login _ DE

EX NATLSCN EX NATLTA

Return File name

Return

File name

Return

Red Figures were revised 4/23/85 Format

HD x 80 = 3,200 ft² x 1/2 ft

= 1,600 ft³

(DES/TR20. ADWH 1st r. ADWH 2nd r.)

USING "MAXIMUM" D.A'S FOR Jobs 4A, 4B, 4C, 4E, 4G & 5A

STANDARD CONTROL INSTRUCTIONS

```
6 RUNOFF 1   1       6        ~~.4700~~0.89  ~~78.0000~~79.   .54001 0 0 1 0 1
6 REACH  3   2   6   5   1700.0000          .8600            .00001 0 0 1 0 1
6 RUNOFF 1   2       6        ~~.6200~~0.99  ~~78.0000~~79.   .56001 0 0 1 0 1
6 ADDHYD 4   2   5 6 7                                           1 0 0 1 0 1
6 REACH  3   3   7   5    540.0000          .8600            .00000 0 0 0 0 0
6 RUNOFF 1   3       6        ~~.1500~~0.45  81.0000          .47001 0 0 1 0 1
6 ADDHYD 4   3   5 6 7                                           1 0 0 1 0 1
6 REACH  3   4   7   5   1000.0000          .8700            .00000 0 0 0 0 0
6 RUNOFF 1   4       6        .0600          75.0000          .10001 0 0 1 0 1
6 ADDHYD 4   4   5 6 7                                           1 0 0 1 0 1
6 REACH  3   5   7   5   1030.0000          .8700            .00000 0 0 0 0 0
6 RUNOFF 1   5       6        ~~.3300~~0.50  ~~80.0000~~81.   .47001 0 0 1 0 1
6 ADDHYD 4   5   5 6 7                                           1 0 0 1 0 1
6 REACH  3   6   7   5    600.0000          .8800            .00000 0 0 0 0 0
6 RUNOFF 1   6       6        .0500          75.0000          .13001 0 0 1 0 1
6 ADDHYD 4   6   5 6 7                                           1 0 0 1 0 1
6 REACH  3   7   7   5    720.0000          .8800            .00000 0 0 0 0 0
6 RUNOFF 1   7       6        ~~.6200~~1.04  ~~80.0000~~81.   .58001 0 0 1 0 1
6 ADDHYD 4   7   5 6 7                                           1 0 0 1 0 1
6 REACH  3   8   7   5    350.0000          .9000            .00000 0 0 0 0 0
6 RUNOFF 1   8       6        .0300          75.0000          .07001 0 0 1 0 1
6 ADDHYD 4   8   5 6 7                                           1 0 0 1 0 1
6 REACH  3   9   7   5    750.0000          .9000            .00000 0 0 0 0 0
6 RUNOFF 1   9       6        ~~2.0000~~2.24  83.0000          .41001 0 0 1 0 1
6 ADDHYD 4   9   5 6 7                                           1 0 0 1 0 1
6 REACH  3  10   7   5    810.0000          .9100            .00000 0 0 0 0 0
6 RUNOFF 1  10       6        .1700          75.0000          .33001 0 0 1 0 1
6 ADDHYD 4  10   5 6 7                                           1 0 0 1 0 1
6 REACH  3  11   7   5    280.0000          .9100            .00000 0 0 0 0 0
6 RUNOFF 1  11       6        .0300          75.0000          .10001 0 0 1 0 1
6 ADDHYD 4  11   5 6 7                                           1 1 0 1 0 1
6 REACH  3  12   7   5    440.0000          .9100            .00000 0 0 0 0 0
6 RUNOFF 1  12       6        .3200          79.0000          .34001 0 0 1 0 1
6 ADDHYD 4  12   5 6 7                                           1 0 0 1 0 1
6 REACH  3  13   7   5    970.0000          .9100            .00000 0 0 0 0 0
6 RUNOFF 1  13       6        .1100          75.0000          .12001 0 0 1 0 1
6 ADDHYD 4  13   5 6 7                                           1 0 0 1 0 1
6 REACH  3  14   7   5       .0000        340.0000           .91000 0 0 0 0 0
6 RUNOFF 1  14       6        .7100          80.0000          .40001 0 0 1 0 1
6 ADDHYD 4  14   5 6 7                                           1 1 0 1 0 1
  ENDATA
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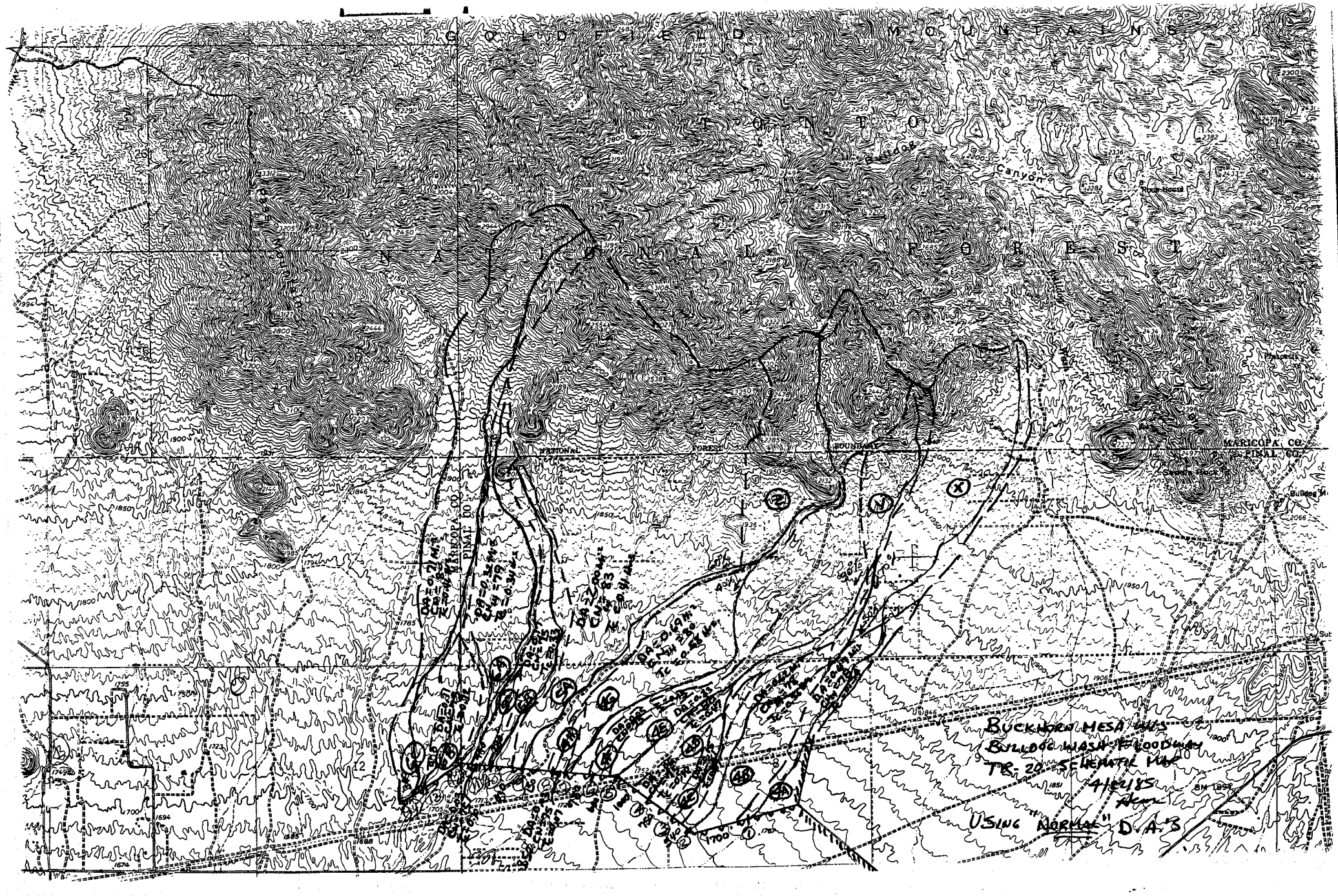
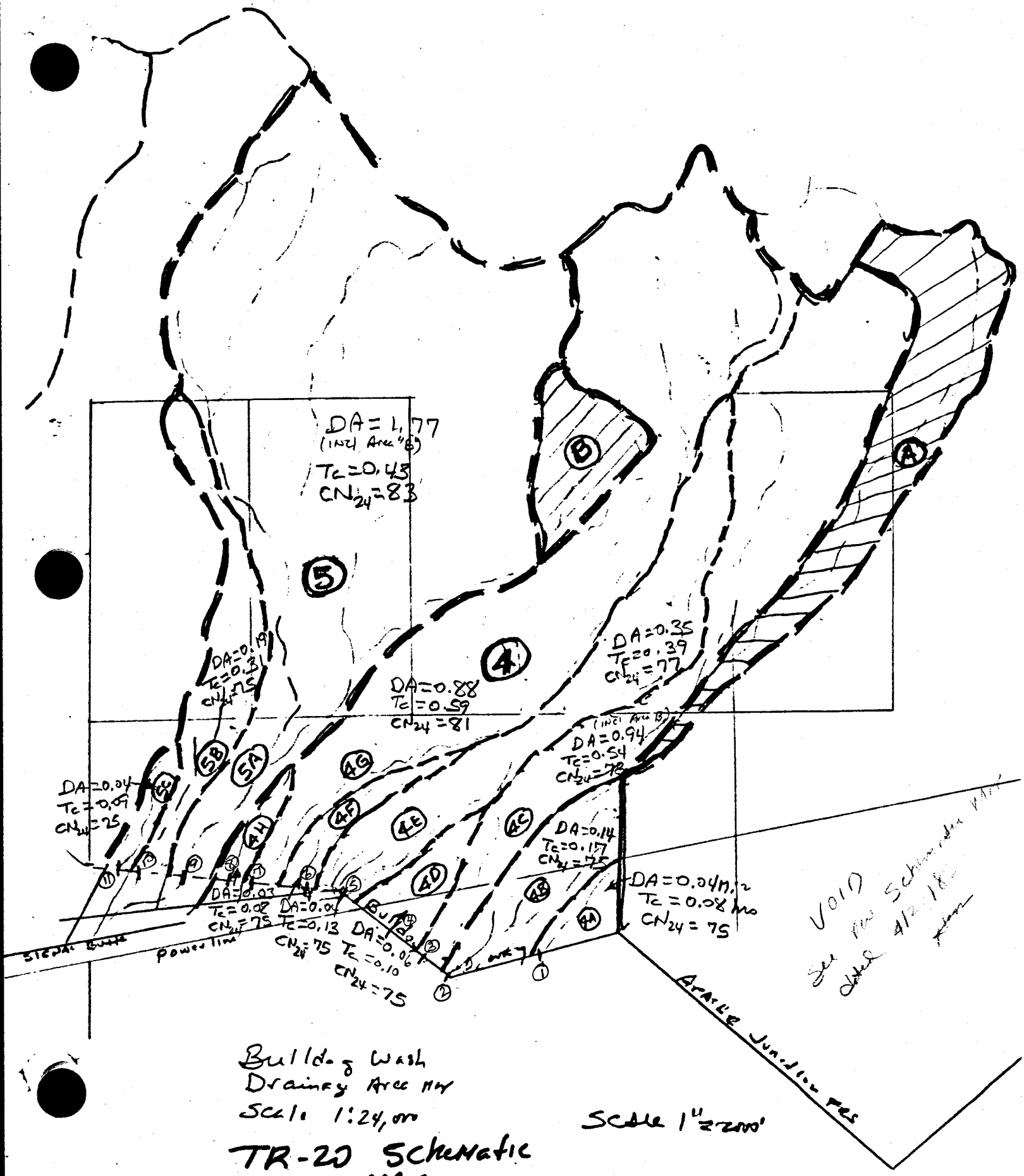
END OF LISTING


GOLDFIELD MOUNTAINS
TONTO
NATIONAL FOREST
MARICOPA CO.
PINAL CO.
Canyon
Rock House
Pinkerton
Bulldog Mt.
BUCKHORN MESA
BULLDOG WASH FLOODWAY
TR-20 SCHEMATIC MAP
4/22/85
USING "NORMAL" D.A.'S



Bulldog Wash
Drainage Area Map
Scale 1:24,000

Scale 1" = 2000'

TR-20 Schematic
MAP

```
@RUN,L SCS04M,1604000101/  SCS0401,SCS04,5,5000/1000

@SYM PRINT$,1,FCB°04

@ASG,T 25.,F///50

@ASG,T 23.,F///50

@ASG,T 22.,F///50

@XQT   SCS76*ABS.TR20/CONVEX
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BUCKHORN MESA W/S
BULLDOG WASH FLOODWAY
INLET DESIGN HYDROLOGY
2-YEAR, 24-Hour
10-YEAR, 24-Hour
100-YEAR, 24-Hour

(DES/TR20.ADWH)
4/23/85
Hem

"USING NORMAL DRAINAGE AREAS"

NOTE!! 105 CFS Base Flow (P. Spy Flow) From Apache Junction FRS was Added to Each Storm, Based on Work Plan Supplement dated JUNE 1976

BULLDOG WASH,DESIGN HYDROLOGY 04/23/85

TR-20 HYDROLOGY

EXECUTIVE CONTROL CARD 33 OPERATION LIST

LISTING OF DATA IN CORE

0 BULLDOG WASH,DESIGN HYDROLOGY

VELOCITY INCREMENT

1 CTABLE .2000

8	.0000	.0800	.1800	.2500	.3200
8	.3700	.4100	.4500	.4900	.5100
8	.5400	.5700	.5900	.6100	.6300
8	.6500	.6600	.6700	.6900	.7000
8	.7100	.7200	.7300	.7400	.7500
8	.7600	.7700	.7700	.7800	.7900
8	.7900	.8000	.8100	.8100	.8200
8	.8200	.8300	.8300	.8400	.8400
8	.8400	.8500	.8500	.8600	.8600
8	.8600	.8600	.8700	.8700	.8700
8	.8800	.8800	.8800	.8900	.8900
8	.8900	.8900	.8900	.8900	.9000
8	.9000	.9000	.9000	.9000	.9100
8	.9100	.9100	.9100	.9100	.9100
8	.9200	.9200	.9200	.9200	.9200
8	.9200	.9200	.9200	.9300	.9300

9 ENDTBL

TIME INCREMENT

4 DIMHYD

8	.0000	.0300	.1000	.1900	.3100
8	.4700	.6600	.8200	.9300	.9900
8	1.0000	.9900	.9300	.8600	.7800
8	.6900	.5600	.4600	.3900	.3300
8	.2800	.2410	.2070	.1740	.1470
8	.1260	.1070	.0910	.0770	.0660
8	.0550	.0470	.0400	.0340	.0290
8	.0250	.0210	.0180	.0150	.0130
8	.0110	.0090	.0080	.0070	.0060
8	.0050	.0040	.0030	.0020	.0010
8	.0000	.0000	.0000	.0000	.0000

9 ENDTBL

COMPUTED PEAK K FACTOR = 484.00

TIME INCREMENT

```
8                .0000       .0080       .0170       .0260       .0350
8                .0450       .0550       .0650       .0760       .0870
8                .0990       .1120       .1250       .1400       .1560
8                .1740       .1940       .2190       .2540       .3030
8                .5150       .5830       .6240       .6540       .6820
8                .7050       .7270       .7480       .7670       .7840
8                .8000       .8160       .8300       .8440       .8570
8                .8700       .8820       .8930       .9050       .9160
8                .9260       .9360       .9460       .9550       .9650
8                .9740       .9830       .9920      1.0000      1.0000
9 ENDTBL

                  TIME INCREMENT
5 RAINFL 2                  .5000

8                .0000       .0050       .0110       .0160       .0220
8                .0280       .0350       .0410       .0480       .0560
8                .0630       .0710       .0800       .0890       .0980
8                .1090       .1200       .1330       .1470       .1630
8                .1810       .2040       .2350       .2830       .6630
8                .7350       .7720       .7990       .8200       .8380
8                .8540       .8680       .8800       .8910       .9020
8                .9120       .9210       .9290       .9370       .9450
8                .9520       .9590       .9650       .9720       .9780
8                .9840       .9890       .9950      1.0000      1.0000
9 ENDTBL

                  TIME INCREMENT
5 RAINFL 3                  .0200

8                .0000       .0080       .0162       .0246       .0333
8                .0425       .0524       .0630       .0743       .0863
8                .0990       .1124       .1265       .1420       .1600
8                .1800       .2050       .2550       .3450       .4370
8                .5300       .6030       .6330       .6600       .6840
8                .7050       .7240       .7420       .7590       .7750
8                .7900       .8043       .8180       .8312       .8439
8                .8561       .8678       .8790       .8898       .9002
8                .9103       .9201       .9297       .9391       .9483
8                .9573       .9661       .9747       .9832       .9916
8               1.0000      1.0000      1.0000      1.0000      1.0000
9 ENDTBL
```

STANDARD CONTROL INSTRUCTIONS

```
6 RUNOFF 1   1       6        .4700      78.0000       .54001 0 0 1 0 1
6 REACH  3   2   6   5    1700.0000        .8600       .00001 0 0 1 0 1
6 RUNOFF 1   2       6        .6200      78.0000       .56001 0 0 1 0 1
6 ADDHYD 4   2   5 6 7                                      1 0 0 1 0 1
6 REACH  3   3   7   5     540.0000        .8600       .00000 0 0 0 0 0
6 RUNOFF 1   3       6        .1500      81.0000       .47001 0 0 1 0 1
6 ADDHYD 4   3   5 6 7                                      1 0 0 1 0 1
6 REACH  3   4   7   5    1000.0000        .8700       .00000 0 0 0 0 0
6 RUNOFF 1   4       6        .0600      75.0000       .10001 0 0 1 0 1
6 ADDHYD 4   4   5 6 7                                      1 0 0 1 0 1
6 REACH  3   5   7   5    1030.0000        .8700       .00000 0 0 0 0 0
6 RUNOFF 1   5       6        .3300      80.0000       .47001 0 0 1 0 1
6 ADDHYD 4   5   5 6 7                                      1 0 0 1 0 1
6 REACH  3   6   7   5     600.0000        .8800       .00000 0 0 0 0 0
6 RUNOFF 1   6       6        .0500      75.0000       .13001 0 0 1 0 1
6 ADDHYD 4   6   5 6 7                                      1 0 0 1 0 1
6 REACH  3   7   7   5     720.0000        .8800       .00000 0 0 0 0 0
6 RUNOFF 1   7       6        .6900      80.0000       .58001 0 0 1 0 1
6 ADDHYD 4   7   5 6 7                                      1 0 0 1 0 1
6 REACH  3   8   7   5     350.0000        .9000       .00000 0 0 0 0 0
6 RUNOFF 1   8       6        .0300      75.0000       .07001 0 0 1 0 1
6 ADDHYD 4   8   5 6 7                                      1 0 0 1 0 1
6 REACH  3   9   7   5     750.0000        .9000       .00000 0 0 0 0 0
6 RUNOFF 1   9       6       2.0000      83.0000       .41001 0 0 1 0 1
6 ADDHYD 4   9   5 6 7                                      1 0 0 1 0 1
6 REACH  3  10   7   5     810.0000        .9100       .00000 0 0 0 0 0
6 RUNOFF 1  10       6        .1700      75.0000       .33001 0 0 1 0 1
6 ADDHYD 4  10   5 6 7                                      1 0 0 1 0 1
6 REACH  3  11   7   5     280.0000        .9100       .00000 0 0 0 0 0
6 RUNOFF 1  11       6        .0300      75.0000       .10001 0 0 1 0 1
6 ADDHYD 4  11   5 6 7                                      1 1 0 1 0 1
6 REACH  3  12   7   5     440.0000        .9100       .00000 0 0 0 0 0
6 RUNOFF 1  12       6        .3200      79.0000       .34001 0 0 1 0 1
6 ADDHYD 4  12   5 6 7                                      1 0 0 1 0 1
6 REACH  3  13   7   5     970.0000        .9100       .00000 0 0 0 0 0
6 RUNOFF 1  13       6        .1100      75.0000       .12001 0 0 1 0 1
6 ADDHYD 4  13   5 6 7                                      1 0 0 1 0 1
6 REACH  3  14   7   5        .0000     340.0000       .91000 0 0 0 0 0
6 RUNOFF 1  14       6        .7100      80.0000       .40001 0 0 1 0 1
6 ADDHYD 4  14   5 6 7                                      1 1 0 1 0 1
  ENDATA
```

END OF LISTING

```
                                                                                                                PASS=  1
EXECUTIVE CONTROL CARD        34   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********    OPERATION
EXECUTIVE CONTROL CARD        35   OPERATION  INCREM,     MAIN TIME INCREMENT=   .10
EXECUTIVE CONTROL CARD        36   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  14/  0
        STARTING TIME=   .00      RAIN DEPTH=  1.45     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
        ALTERNATE NO.= 1          STORM NO.= 1


SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=    .47     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.28                         29.990                       (RUNOFF)
              16.97                          3.574                       (RUNOFF)
              19.47                          2.751                       (RUNOFF)
              21.62                          2.416                       (RUNOFF)
              23.62                          2.118                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2115        CFS-HRS=       64.15        ACRE-FT=       5.30


SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1700.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.33                        134.557                        (NULL)
              17.03                        108.573                        (NULL)
              19.53                        107.750                        (NULL)
              21.66                        107.410                        (NULL)
              23.66                        107.112                        (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=  10.5618        CFS-HRS=     3203.65        ACRE-FT=     264.75


SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=    .62     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .56

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.29                         39.026                       (RUNOFF)
              16.98                          4.717                       (RUNOFF)
              19.48                          3.630                       (RUNOFF)
              21.63                          3.188                       (RUNOFF)
              23.63                          2.785                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2114        CFS-HRS=       84.57        ACRE-FT=       6.99


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.31                        173.389                        (NULL)
              16.97                        113.289                        (NULL)
```

21.64	110.597	(NULL)
23.64	109.895	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 4.6744 CFS-HRS= 3288.22 ACRE-FT= 271.74

SUBROUTINE REACH CROSS SECTION 3
LENGTH= 540.00 INPUT COEFFICIENT= .8600 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 10.443 AVERAGE ROUTING COEFF= .8600 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 3
AREA= .15 INPUT RUNOFF CURVE= 81.0 TIME OF CONCENTRATION= .47

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.20	16.674	(RUNOFF)
17.02	1.400	(RUNOFF)
19.51	1.065	(RUNOFF)
21.58	.935	(RUNOFF)
23.58	.815	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .2886 CFS-HRS= 27.94 ACRE-FT= 2.31

SUBROUTINE ADDHYD CROSS SECTION 3
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.30	187.796	(NULL)
16.97	114.688	(NULL)
19.49	112.443	(NULL)
21.64	111.523	(NULL)
23.64	110.701	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 4.1439 CFS-HRS= 3316.16 ACRE-FT= 274.05

SUBROUTINE REACH CROSS SECTION 4
LENGTH= 1000.00 INPUT COEFFICIENT= .8700 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 11.377 AVERAGE ROUTING COEFF= .8700 NUMBER OF ROUTINGS= .21

SUBROUTINE RUNOFF CROSS SECTION 4
AREA= .06 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .10

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.00	4.802	(RUNOFF)
12.46	1.616	(RUNOFF)
12.96	.932	(RUNOFF)
13.46	.730	(RUNOFF)
13.96	.595	(RUNOFF)
14.46	.530	(RUNOFF)
14.96	.488	(RUNOFF)
15.45	.440	(RUNOFF)

```
                                                                    (RUNOFF)
  16.95                                .367
TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1476        CFS-HRS=        5.72        ACRE-FT=        .47

SUBROUTINE ADDHYD    CROSS SECTION    4
INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
   12.32                         188.414                       (NULL)
   16.96                         115.055                       (NULL)
   19.47                         112.727                       (NULL)
   21.65                         111.740                       (NULL)
   23.65                         110.888                       (NULL)
TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.9594        CFS-HRS=     3321.88        ACRE-FT=     274.52

SUBROUTINE REACH     CROSS SECTION    5
LENGTH=    1030.00     INPUT COEFFICIENT=    .8700     INPUT ROUTINGS=    .00
AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=    .22

SUBROUTINE RUNOFF    CROSS SECTION    5
AREA=    .33     INPUT RUNOFF CURVE=  80.0     TIME OF CONCENTRATION=    .47

PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
   12.20                          31.795                      (RUNOFF)
   16.99                           2.884                      (RUNOFF)
   19.48                           2.204                      (RUNOFF)
   21.58                           1.939                      (RUNOFF)
   23.58                           1.692                      (RUNOFF)
TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2610        CFS-HRS=       55.59        ACRE-FT=       4.59

SUBROUTINE ADDHYD    CROSS SECTION    5
INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
   12.30                         215.579                       (NULL)
   16.96                         117.937                       (NULL)
   19.48                         114.828                       (NULL)
   21.65                         113.660                       (NULL)
   23.64                         112.561                       (NULL)
TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.2107        CFS-HRS=     3377.48        ACRE-FT=     279.12

SUBROUTINE REACH     CROSS SECTION    6
LENGTH=     600.00     INPUT COEFFICIENT=    .8800     INPUT ROUTINGS=    .00
AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=    .12
```

```
AREA=     .05     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=    .13

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.02                            3.548                       (RUNOFF)
   12.47                            1.318                       (RUNOFF)
   12.96                             .768                       (RUNOFF)
   13.46                             .604                       (RUNOFF)
   13.96                             .493                       (RUNOFF)
   14.46                             .440                       (RUNOFF)
   14.96                             .405                       (RUNOFF)
   15.46                             .365                       (RUNOFF)
   15.96                             .319                       (RUNOFF)
   16.96                             .305                       (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1484        CFS-HRS=        4.79        ACRE-FT=        .40


SUBROUTINE ADDHYD    CROSS SECTION    6
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.32                          216.116                        (NULL)
   16.96                          118.242                        (NULL)
   19.47                          115.165                        (NULL)
   21.65                          113.846                        (NULL)
   23.64                          112.723                        (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.1195        CFS-HRS=     3382.28        ACRE-FT=     279.51


SUBROUTINE REACH     CROSS SECTION    7
LENGTH=    720.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=   .14


SUBROUTINE RUNOFF    CROSS SECTION    7
AREA=     .69     INPUT RUNOFF CURVE=  80.0     TIME OF CONCENTRATION=    .58

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.29                           57.925                       (RUNOFF)
   19.48                            4.603                       (RUNOFF)
   21.64                            4.007                       (RUNOFF)
   23.64                            3.490                       (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2611        CFS-HRS=      116.27        ACRE-FT=       9.61


SUBROUTINE ADDHYD    CROSS SECTION    7
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.32                          272.798                        (NULL)
   16.95                          124.278                        (NULL)
   19.48                          119.765                        (NULL)
   21.65                          117.845                        (NULL)
```

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.2873 CFS-HRS= 3498.56 ACRE-FT= 289.12

SUBROUTINE REACH CROSS SECTION 8
LENGTH= 350.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 8
AREA= .03 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .07

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.99	2.701	(RUNOFF)
12.46	.825	(RUNOFF)
12.96	.471	(RUNOFF)
13.46	.369	(RUNOFF)
13.96	.299	(RUNOFF)
14.46	.266	(RUNOFF)
14.96	.245	(RUNOFF)
15.45	.221	(RUNOFF)
15.96	.193	(RUNOFF)
16.95	.184	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1479 CFS-HRS= 2.86 ACRE-FT= .24

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.32	272.997	(NULL)
19.47	119.907	(NULL)
21.66	117.953	(NULL)
23.66	116.297	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.2606 CFS-HRS= 3501.42 ACRE-FT= 289.36

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 9
AREA= 2.00 INPUT RUNOFF CURVE= 83.0 TIME OF CONCENTRATION= .41

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.14	310.299	(RUNOFF)
16.97	21.109	(RUNOFF)
19.46	15.965	(RUNOFF)
21.55	14.034	(RUNOFF)
23.55	12.203	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .3499 CFS-HRS= 451.57 ACRE-FT= 37.32

```
SUBROUTINE ADDHYD    CROSS SECTION   9
        INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           12.19                         551.803                      (NULL)
           16.96                         145.571                      (NULL)
           19.47                         135.868                      (NULL)
           21.59                         131.912                      (NULL)
           23.59                         128.428                      (NULL)

        TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.3921        CFS-HRS=     3953.00        ACRE-FT=     326.68

SUBROUTINE REACH     CROSS SECTION  10
        LENGTH=    810.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

        AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
        AREA=    .17     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .33

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           12.15                          7.934                     (RUNOFF)
           16.99                          1.025                     (RUNOFF)
           19.46                           .803                     (RUNOFF)
           20.46                           .719                     (RUNOFF)
           21.53                           .726                     (RUNOFF)
           22.45                           .640                     (RUNOFF)
           23.51                           .640                     (RUNOFF)

        TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1489        CFS-HRS=       16.34        ACRE-FT=       1.35

SUBROUTINE ADDHYD    CROSS SECTION  10
        INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           12.20                         556.041                      (NULL)
           16.96                         146.592                      (NULL)
           19.47                         136.665                      (NULL)
           21.60                         132.608                      (NULL)
           23.60                         129.040                      (NULL)

        TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.3458        CFS-HRS=     3969.32        ACRE-FT=     328.02

SUBROUTINE REACH     CROSS SECTION  11
        LENGTH=    280.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

        AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .04

SUBROUTINE RUNOFF    CROSS SECTION  11
        AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.00	2.401	(RUNOFF)
12.46	.808	(RUNOFF)
12.96	.466	(RUNOFF)
13.46	.365	(RUNOFF)
13.96	.297	(RUNOFF)
14.46	.265	(RUNOFF)
14.96	.244	(RUNOFF)
15.45	.220	(RUNOFF)
15.96	.192	(RUNOFF)
16.95	.183	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1476 CFS-HRS= 2.86 ACRE-FT= .24

SUBROUTINE ADDHYD CROSS SECTION 11
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	555.391	(NULL)
16.96	146.775	(NULL)
19.47	136.807	(NULL)
21.60	132.715	(NULL)
23.60	129.131	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 4.60

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
10.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
11.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.11	108.18	129.08	182.01	277.61
12.00	DISCHG	404.58	514.84	555.14	526.61	469.80	418.11	376.84	339.81	305.81	278.23
13.00	DISCHG	258.20	243.63	231.24	220.23	211.54	205.41	200.53	195.55	190.39	185.93
14.00	DISCHG	182.71	180.14	177.58	174.97	172.72	171.11	169.75	168.28	166.68	165.26
15.00	DISCHG	164.24	163.26	161.99	160.49	159.11	158.07	157.06	155.72	154.15	152.71
16.00	DISCHG	151.62	150.71	149.79	148.85	148.04	147.45	147.08	146.87	146.77	146.75
17.00	DISCHG	146.76	146.63	146.22	145.58	144.94	144.45	143.94	143.26	142.44	141.68
18.00	DISCHG	141.10	140.53	139.81	138.94	138.15	137.56	137.16	136.90	136.76	136.69
19.00	DISCHG	136.67	136.67	136.69	136.73	136.77	136.80	136.65	136.19	135.49	134.79
20.00	DISCHG	134.24	133.85	133.61	133.47	133.39	133.35	133.14	132.63	131.89	131.17
21.00	DISCHG	130.60	130.40	130.66	131.26	131.94	132.50	132.72	132.49	131.92	131.29
22.00	DISCHG	130.78	130.42	130.19	130.04	129.96	129.91	129.69	129.16	128.40	127.63
23.00	DISCHG	127.05	126.84	127.09	127.70	128.38	128.92	129.13	128.89	128.31	127.66
24.00	DISCHG	127.06	125.66	122.71	118.65	114.62	111.45	109.16	107.64	106.65	106.03
25.00	DISCHG	105.65	105.40	105.24	105.14	105.08	105.05	105.03	105.01	105.00	105.00
26.00	DISCHG	105.00	105.00	105.00	105.00	[illegible]	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	[illegible]	105.00	105.00	105.00	105.00	105.0
28.00	DISCHG	105.00	105.00	105.00	105.00	[illegible]	105.00	105.00	105.00	105.00	105.0
29.00	DISCHG	105.00	105.00	105.00	105.00	[illegible]	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.3380 CFS-HRS= 3972.17 ACRE-FT= 328.26

SUBROUTINE REACH CROSS SECTION 12
LENGTH= 440.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 12
AREA= .32 INPUT RUNOFF CURVE= 79.0 TIME OF CONCENTRATION= .34

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.13	31.848	(RUNOFF)
16.98	2.616	(RUNOFF)
19.46	2.009	(RUNOFF)
20.45	1.788	(RUNOFF)
21.52	1.791	(RUNOFF)
22.45	1.577	(RUNOFF)
23.52	1.570	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .2353 CFS-HRS= 48.60 ACRE-FT= 4.02

SUBROUTINE ADDHYD CROSS SECTION 12
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	581.837	(NULL)
16.96	149.389	(NULL)
19.47	138.812	(NULL)
21.60	134.481	(NULL)
23.59	130.677	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.2663 CFS-HRS= 4020.76 ACRE-FT= 332.28

SUBROUTINE REACH CROSS SECTION 13
LENGTH= 970.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 13
AREA= .11 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .12

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.01	8.097	(RUNOFF)
12.46	2.914	(RUNOFF)
12.96	1.698	(RUNOFF)
13.46	1.332	(RUNOFF)
13.96	1.087	(RUNOFF)
14.46	.969	(RUNOFF)
14.96	.892	(RUNOFF)
15.46	.804	(RUNOFF)
15.96	.703	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1482 CFS-HRS= 10.52 ACRE-FT= .87

SUBROUTINE ADDHYD CROSS SECTION 13
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.22	579.986	(NULL)
16.96	150.056	(NULL)
19.47	139.330	(NULL)
21.60	134.883	(NULL)
23.60	131.024	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.2418 CFS-HRS= 4031.27 ACRE-FT= 333.14

SUBROUTINE REACH CROSS SECTION 14
LENGTH= .00 INPUT COEFFICIENT=340.0000 INPUT ROUTINGS= .91

AVERAGE WATER VELOCITY= .000 AVERAGE ROUTING COEFF= .0000 NUMBER OF ROUTINGS= .00

SUBROUTINE RUNOFF CROSS SECTION 14
AREA= .71 INPUT RUNOFF CURVE= 80.0 TIME OF CONCENTRATION= .40

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	74.832	(RUNOFF)
16.98	6.207	(RUNOFF)
19.46	4.745	(RUNOFF)
20.45	4.224	(RUNOFF)
21.56	4.202	(RUNOFF)
23.55	3.672	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .2611 CFS-HRS= 119.64 ACRE-FT= 9.89

SUBROUTINE ADDHYD CROSS SECTION 14
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	652.514	(NULL)
16.96	156.263	(NULL)
19.47	144.075	(NULL)
21.59	139.075	(NULL)
23.59	134.686	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 5.74

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

10.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
11.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.09	107.66	127.33	185.00	300.54
12.00	DISCHG	461.02	599.73	652.07	617.38	547.95	485.74	435.41	390.29	348.96	315.31
13.00	DISCHG	291.21	273.52	258.53	245.22	234.74	227.40	221.50	215.46	209.21	203.82
14.00	DISCHG	199.94	196.83	193.71	190.54	187.81	185.88	184.24	182.43	180.48	178.77
15.00	DISCHG	177.54	176.34	174.77	172.94	171.26	170.01	168.76	167.12	165.18	163.41
16.00	DISCHG	162.10	161.00	159.87	158.73	157.74	157.04	156.60	156.35	156.24	156.22
17.00	DISCHG	156.25	156.08	155.55	154.76	153.98	153.39	152.77	151.92	150.91	149.98
18.00	DISCHG	149.28	148.58	147.68	146.62	145.66	144.94	144.46	144.16	143.99	143.91
19.00	DISCHG	143.89	143.90	143.93	143.97	144.02	144.06	143.87	143.28	142.41	141.55
20.00	DISCHG	140.88	140.42	140.14	139.97	139.88	139.83	139.56	138.92	138.00	137.10
21.00	DISCHG	136.42	136.20	136.55	137.31	138.15	138.83	139.07	138.76	138.06	137.28
22.00	DISCHG	136.66	136.23	135.94	135.77	135.68	135.62	135.33	134.67	133.71	132.77
23.00	DISCHG	132.07	131.84	132.18	132.94	133.78	134.45	134.68	134.36	133.63	132.83
24.00	DISCHG	132.11	130.29	126.57	121.50	116.54	112.70	109.96	108.13	106.95	106.21
25.00	DISCHG	105.75	105.46	105.28	105.16	105.10	105.06	105.03	105.01	105.00	105.00
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.1205 CFS-HRS= 4150.91 ACRE-FT= 343.03

ENDCMP

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                                                                                                PASS=  2
EXECUTIVE CONTROL CARD       37A   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********    OPERATION
EXECUTIVF CONTROL CARD        38   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  14/  0
        STARTING TIME=    .00     RAIN DEPTH=  2.58     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
        ALTERNATE NO.= 1          STORM NO.= 1


SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=     .47     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                         163.384                      (RUNOFF)
              19.45                           7.952                      (RUNOFF)
              21.61                           6.859                      (RUNOFF)
              23.62                           5.934                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .8389        CFS-HRS=      254.45        ACRE-FT=      21.03


SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1700.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.24                         265.286                       (NULL)
              19.46                         112.950                       (NULL)
              21.65                         111.843                       (NULL)
              23.66                         110.919                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=  11.1892        CFS-HRS=     3393.95        ACRE-FT=     280.48


SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=     .62     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .56

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.21                         215.380                      (RUNOFF)
              19.46                          10.492                      (RUNOFF)
              21.63                           9.051                      (RUNOFF)
              23.62                           7.805                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .8394        CFS-HRS=      335.88        ACRE-FT=      27.76


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.22                         479.874                       (NULL)
              19.46                         123.443                       (NULL)
              21.64                         120.892                       (NULL)
              23.64                         118.719                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   5.3022        CFS-HRS=     3729.83        ACRE-FT=     308.23
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SUBROUTINE REACH      CROSS SECTION   3
          LENGTH=    540.00      INPUT COEFFICIENT=   .8600      INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  10.443        AVERAGE ROUTING COEFF=  .8600        NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF     CROSS SECTION   3
          AREA=    .15      INPUT RUNOFF CURVE=  81.0      TIME OF CONCENTRATION=   .47

          PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
             12.14                            69.219                      (RUNOFF)
             19.46                             2.802                      (RUNOFF)
             21.58                             2.426                      (RUNOFF)
             23.58                             2.092                      (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .9975        CFS-HRS=       96.56        ACRE-FT=       7.98

SUBROUTINE ADDHYD     CROSS SECTION   3
          INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

          PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
             12.22                           542.383                      (NULL)
             19.46                           126.243                      (NULL)
             21.64                           123.293                      (NULL)
             23.64                           120.788                      (NULL)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.7815        CFS-HRS=     3826.40        ACRE-FT=     316.21

SUBROUTINE REACH      CROSS SECTION   4
          LENGTH=   1000.00      INPUT COEFFICIENT=   .8700      INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  11.377        AVERAGE ROUTING COEFF=  .8700        NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF     CROSS SECTION   4
          AREA=    .06      INPUT RUNOFF CURVE=  75.0      TIME OF CONCENTRATION=   .10

          PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
             11.97                            29.217                      (RUNOFF)
             12.45                             6.830                      (RUNOFF)
             12.95                             3.646                      (RUNOFF)
             13.45                             2.740                      (RUNOFF)
             13.95                             2.168                      (RUNOFF)
             14.45                             1.889                      (RUNOFF)
             14.95                             1.709                      (RUNOFF)
             15.45                             1.518                      (RUNOFF)
             15.95                             1.308                      (RUNOFF)
             16.95                             1.223                      (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6898        CFS-HRS=       26.71        ACRE-FT=       2.21

SUBROUTINE ADDHYD     CROSS SECTION   4
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PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.24                           542.852                      (NULL)
   19.46                           127.163                      (NULL)
   21.65                           123.981                      (NULL)
   23.65                           121.370                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.5926        CFS-HRS=     3853.12        ACRE-FT=     318.42


SUBROUTINE REACH     CROSS SECTION   5
           LENGTH=   1030.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .22


SUBROUTINE RUNOFF    CROSS SECTION   5
           AREA=    .33     INPUT RUNOFF CURVE=  80.0     TIME OF CONCENTRATION=   .47

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.15                           142.569                     (RUNOFF)
              16.95                             8.014                     (RUNOFF)
              19.46                             5.973                     (RUNOFF)
              21.58                             5.176                     (RUNOFF)
              23.58                             4.467                     (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .9424        CFS-HRS=      200.71        ACRE-FT=      16.59


SUBROUTINE ADDHYD    CROSS SECTION   5
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.23                           670.310                      (NULL)
              19.46                           133.131                      (NULL)
              21.64                           129.108                      (NULL)
              23.64                           125.788                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.8537        CFS-HRS=     4053.92        ACRE-FT=     335.02


SUBROUTINE REACH     CROSS SECTION   6
           LENGTH=    600.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION   6
           AREA=    .05     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .13

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              11.98                            22.835                     (RUNOFF)
              12.46                             5.607                     (RUNOFF)
              12.95                             3.014                     (RUNOFF)
              13.45                             2.270                     (RUNOFF)
              13.95                             1.800                     (RUNOFF)
              14.45                             1.568                     (RUNOFF)
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15.45	1.259	(RUNOFF)
15.95	1.088	(RUNOFF)
16.95	1.017	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6939 CFS-HRS= 22.39 ACRE-FT= 1.85

SUBROUTINE ADDHYD CROSS SECTION 6
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.24	671.990	(NULL)
19.46	133.895	(NULL)
21.64	129.700	(NULL)
23.64	126.292	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.7597 CFS-HRS= 4076.35 ACRE-FT= 336.87

SUBROUTINE REACH CROSS SECTION 7
LENGTH= 720.00 INPUT COEFFICIENT= .8800 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 12.467 AVERAGE ROUTING COEFF= .8800 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 7
AREA= .69 INPUT RUNOFF CURVE= 80.0 TIME OF CONCENTRATION= .58

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.22	265.178	(RUNOFF)
19.45	12.483	(RUNOFF)
21.63	10.700	(RUNOFF)
23.63	9.216	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9429 CFS-HRS= 419.86 ACRE-FT= 34.70

SUBROUTINE ADDHYD CROSS SECTION 7
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.24	932.011	(NULL)
19.46	146.373	(NULL)
21.65	140.380	(NULL)
23.65	135.489	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.9396 CFS-HRS= 4496.25 ACRE-FT= 371.57

SUBROUTINE REACH CROSS SECTION 8
LENGTH= 350.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COFFF= .9000 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 8

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.97	15.422	(RUNOFF)
12.45	3.462	(RUNOFF)
12.95	1.837	(RUNOFF)
13.45	1.380	(RUNOFF)
13.95	1.089	(RUNOFF)
14.45	.947	(RUNOFF)
14.95	.857	(RUNOFF)
15.45	.761	(RUNOFF)
15.95	.656	(RUNOFF)
16.95	.613	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6903 CFS-HRS= 13.36 ACRE-FT= 1.10

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.24	932.420	(NULL)
19.46	146.834	(NULL)
21.65	140.719	(NULL)
23.65	135.775	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.9115 CFS-HRS= 4509.63 ACRE-FT= 372.68

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 9
AREA= 2.00 INPUT RUNOFF CURVE= 83.0 TIME OF CONCENTRATION= .41

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.10	1109.321	(RUNOFF)
16.95	53.487	(RUNOFF)
19.43	39.642	(RUNOFF)
21.55	34.470	(RUNOFF)
23.55	29.708	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.1146 CFS-HRS= 1438.64 ACRE-FT= 118.89

SUBROUTINE ADDHYD CROSS SECTION 9
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.15	1962.994	(NULL)
19.45	186.500	(NULL)
21.59	175.008	(NULL)
23.59	165.310	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0948 CFS-HRS= 5948.34 ACRE-FT= 491.57

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SUBROUTINE REACH     CROSS SECTION  10
          LENGTH=    810.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
          AREA=    .17     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .33

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             12.09                          60.586                      (RUNOFF)
             16.96                           3.430                      (RUNOFF)
             19.45                           2.586                      (RUNOFF)
             20.45                           2.288                      (RUNOFF)
             21.51                           2.283                      (RUNOFF)
             22.45                           1.999                      (RUNOFF)
             23.51                           1.983                      (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6970        CFS-HRS=       76.47        ACRE-FT=       6.32

SUBROUTINE ADDHYD    CROSS SECTION  10
          INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             12.16                        1997.601                       (NULL)
             19.45                         189.076                       (NULL)
             21.59                         177.216                       (NULL)
             23.59                         167.218                       (NULL)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.0428        CFS-HRS=     6024.77        ACRE-FT=     497.89

SUBROUTINE REACH     CROSS SECTION  11
          LENGTH=    280.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .04

SUBROUTINE RUNOFF    CROSS SECTION  11
          AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             11.97                          14.608                      (RUNOFF)
             12.45                           3.415                      (RUNOFF)
             12.95                           1.823                      (RUNOFF)
             13.45                           1.370                      (RUNOFF)
             13.95                           1.084                      (RUNOFF)
             14.45                            .945                      (RUNOFF)
             14.95                            .855                      (RUNOFF)
             15.45                            .759                      (RUNOFF)
             15.95                            .654                      (RUNOFF)
             16.95                            .612                      (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6897        CFS-HRS=       13.35        ACRE-FT=       1.10
```

SUBROUTINE ADDHYD CROSS SECTION 11
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	1996.769	(NULL)
19.45	189.535	(NULL)
21.60	177.559	(NULL)
23.59	167.508	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 4.60

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.04	105.22	105.62	106.29	107.12
10.00	DISCHG	108.05	109.13	110.50	112.15	113.93	115.77	117.98	121.12	125.15	129.54
11.00	DISCHG	134.04	139.61	148.34	159.98	172.98	190.25	254.87	457.18	800.50	1227.49
12.00	DISCHG	1663.20	1953.51	1980.80	1784.50	1511.49	1268.78	1075.38	914.16	778.06	672.00
13.00	DISCHG	595.32	539.54	494.17	455.76	425.86	404.41	387.21	370.58	354.14	340.12
14.00	DISCHG	329.80	321.41	313.28	305.20	298.23	293.08	288.66	284.00	279.10	274.72
15.00	DISCHG	271.46	268.30	264.40	259.96	255.85	252.69	249.54	245.59	241.07	236.90
16.00	DISCHG	233.68	230.95	228.22	225.46	223.10	221.33	220.12	219.37	218.94	218.73
17.00	DISCHG	218.63	218.12	216.87	215.04	213.22	211.76	210.26	208.31	206.01	203.88
18.00	DISCHG	202.22	200.57	198.52	196.15	193.96	192.29	191.13	190.36	189.89	189.63
19.00	DISCHG	189.48	189.42	189.41	189.43	189.47	189.48	189.02	187.74	185.86	183.96
20.00	DISCHG	182.46	181.38	180.67	180.23	179.97	179.79	179.18	177.80	175.84	173.91
21.00	DISCHG	172.40	171.82	172.44	173.93	175.62	177.03	177.56	176.95	175.47	173.82
22.00	DISCHG	172.44	171.46	170.80	170.38	170.13	169.95	169.32	167.93	165.93	163.94
23.00	DISCHG	162.41	161.84	162.43	163.93	165.63	167.00	167.51	166.88	165.40	163.72
24.00	DISCHG	162.14	158.42	150.83	140.48	130.19	121.99	116.03	112.03	109.42	107.77
25.00	DISCHG	106.73	106.07	105.66	105.40	105.24	105.14	105.08	105.04	105.02	105.01
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0339 CFS-HRS= 6038.12 ACRE-FT= 498.99

SUBROUTINE REACH CROSS SECTION 12
LENGTH= 440.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 12
AREA= .32 INPUT RUNOFF CURVE= 79.0 TIME OF CONCENTRATION= .34

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.08	149.017	(RUNOFF)

19.45	5.612	(RUNOFF)
20.45	4.955	(RUNOFF)
21.52	4.925	(RUNOFF)
22.45	4.311	(RUNOFF)
23.52	4.266	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .8896 CFS-HRS= 183.72 ACRE-FT= 15.18

SUBROUTINE ADDHYD CROSS SECTION 12
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	2124.018	(NULL)
19.45	195.141	(NULL)
21.59	182.418	(NULL)
23.59	171.712	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.9595 CFS-HRS= 6221.84 ACRE-FT= 514.17

SUBROUTINE REACH CROSS SECTION 13
LENGTH= 970.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 13
AREA= .11 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .12

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.98	51.232	(RUNOFF)
12.46	12.369	(RUNOFF)
12.96	6.654	(RUNOFF)
13.45	5.003	(RUNOFF)
13.95	3.963	(RUNOFF)
14.45	3.456	(RUNOFF)
14.95	3.125	(RUNOFF)
15.45	2.774	(RUNOFF)
15.95	2.395	(RUNOFF)
16.95	2.238	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6927 CFS-HRS= 49.17 ACRE-FT= 4.06

SUBROUTINE ADDHYD CROSS SECTION 13
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.17	2124.523	(NULL)
19.45	196.819	(NULL)
21.60	183.704	(NULL)
23.60	172.805	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.9318 CFS-HRS= 6271.00 ACRE-FT= 518.24

SUBROUTINE REACH CROSS SECTION 14
LENGTH= .00 INPUT COEFFICIENT=340.0000 INPUT ROUTINGS= .91

AVERAGE WATER VELOCITY= .000 AVERAGE ROUTING COEFF= .0000 NUMBER OF ROUTINGS= .00

SUBROUTINE RUNOFF CROSS SECTION 14
AREA= .71 INPUT RUNOFF CURVE= 80.0 TIME OF CONCENTRATION= .40

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.11	330.999	(RUNOFF)
16.96	17.235	(RUNOFF)
19.45	12.854	(RUNOFF)
21.55	11.217	(RUNOFF)
23.55	9.694	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9429 CFS-HRS= 432.07 ACRE-FT= 35.71

SUBROUTINE ADDHYD CROSS SECTION 14
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	2443.640	(NULL)
19.45	209.673	(NULL)
21.59	194.899	(NULL)
23.59	182.475	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 5.74

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.03	105.19	105.54	106.15	106.95
10.00	DISCHG	107.86	108.91	110.22	111.81	113.59	115.52	117.93	121.41	126.09	131.42
11.00	DISCHG	137.06	143.93	154.37	168.38	184.32	204.94	285.11	535.62	963.64	1498.83
12.00	DISCHG	2048.55	2397.76	2418.61	2162.10	1819.07	1524.48	1288.79	1091.80	925.57	795.87
13.00	DISCHG	703.63	636.04	581.05	534.44	498.38	472.73	451.92	431.61	411.53	394.45
14.00	DISCHG	381.98	371.75	361.72	351.79	343.28	337.09	331.67	325.89	319.84	314.53
15.00	DISCHG	310.59	306.66	301.78	296.27	291.24	287.42	283.51	278.56	272.92	267.79
16.00	DISCHG	263.90	260.55	257.18	253.79	250.89	248.77	247.34	246.45	245.95	245.71
17.00	DISCHG	245.60	244.92	243.31	241.02	238.77	237.01	235.13	232.68	229.82	227.19
18.00	DISCHG	225.19	223.14	220.56	217.61	214.93	212.90	211.50	210.60	210.04	209.73
19.00	DISCHG	209.57	209.50	209.50	209.52	209.58	209.60	208.96	207.31	204.95	202.60
20.00	DISCHG	200.77	199.48	198.63	198.11	197.80	197.60	196.79	195.01	192.55	190.15
21.00	DISCHG	188.31	187.71	188.58	190.50	192.61	194.32	194.89	194.02	192.14	190.09
22.00	DISCHG	188.41	187.23	186.43	185.93	185.63	185.44	184.60	182.79	180.28	177.82
23.00	DISCHG	175.96	175.35	176.21	178.12	180.24	181.93	182.46	181.58	179.68	177.59
24.00	DISCHG	175.71	170.79	161.04	147.95	135.20	125.25	118.11	113.31	110.21	108.24
25.00	DISCHG	107.01	106.24	105.76	105.45	105.27	105.16	105.09	105.05	105.02	105.01
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.8095 CFS-HRS= 6703.07 ACRE-FT= 553.94

ENDCMP

```
                                                                                                PASS=  3
EXECUTIVE CONTROL CARD      39A   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********   OPERATION
EXECUTIVE CONTROL CARD       40   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  14/  0
       STARTING TIME=   .00      RAIN DEPTH=  4.05     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
       ALTERNATE NO.= 1          STORM NO.= 3


SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=    .47     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.17                         397.265                      (RUNOFF)
              19.38                          15.363                      (RUNOFF)
              21.61                          13.152                      (RUNOFF)
              23.62                          11.315                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.9232        CFS-HRS=      583.36        ACRE-FT=      48.21


SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1700.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.22                         495.845                       (NULL)
              19.44                         120.365                       (NULL)
              21.65                         118.123                       (NULL)
              23.66                         116.287                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=  12.2736        CFS-HRS=     3722.87        ACRE-FT=     307.66


SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=    .62     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .56

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.18                         524.593                      (RUNOFF)
              19.45                          20.276                      (RUNOFF)
              21.62                          17.356                      (RUNOFF)
              23.62                          14.882                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.9254        CFS-HRS=      770.41        ACRE-FT=      63.67


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                        1018.891                       (NULL)
              19.39                         140.629                       (NULL)
              21.63                         135.474                       (NULL)
              23.64                         131.160                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   6.3875        CFS-HRS=     4493.28        ACRE-FT=     371.32
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SUBROUTINE REACH      CROSS SECTION   3
          LENGTH=    540.00      INPUT COEFFICIENT=    .8600      INPUT ROUTINGS=    .00
          AVERAGE WATER VELOCITY=  10.443        AVERAGE ROUTING COEFF=  .8600        NUMBER OF ROUTINGS=    .12

SUBROUTINE RUNOFF     CROSS SECTION   3
          AREA=     .15      INPUT RUNOFF CURVE=  81.0      TIME OF CONCENTRATION=    .47

          PEAK TIMES                PEAK DISCHARGES                PEAK ELEVATIONS
             12.12                       154.664                       (RUNOFF)
             19.45                         5.196                       (RUNOFF)
             21.58                         4.470                       (RUNOFF)
             23.58                         3.837                       (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.1584        CFS-HRS=       208.94        ACRE-FT=       17.27

SUBROUTINE ADDHYD     CROSS SECTION   3
          INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

          PEAK TIMES                PEAK DISCHARGES                PEAK ELEVATIONS
             12.19                      1159.764                       (NULL)
             19.45                       145.836                       (NULL)
             21.64                       139.898                       (NULL)
             23.64                       134.953                       (NULL)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   5.8759        CFS-HRS=      4702.24        ACRE-FT=      388.59

SUBROUTINE REACH      CROSS SECTION   4
          LENGTH=   1000.00      INPUT COEFFICIENT=    .8700      INPUT ROUTINGS=    .00
          AVERAGE WATER VELOCITY=  11.377        AVERAGE ROUTING COEFF=  .8700        NUMBER OF ROUTINGS=    .21

SUBROUTINE RUNOFF     CROSS SECTION   4
          AREA=     .06      INPUT RUNOFF CURVE=  75.0      TIME OF CONCENTRATION=    .10

          PEAK TIMES                PEAK DISCHARGES                PEAK ELEVATIONS
             11.96                       71.040                       (RUNOFF)
             12.45                       15.108                       (RUNOFF)
             12.95                        7.881                       (RUNOFF)
             13.45                        5.842                       (RUNOFF)
             13.95                        4.578                       (RUNOFF)
             14.45                        3.959                       (RUNOFF)
             14.95                        3.558                       (RUNOFF)
             15.45                        3.143                       (RUNOFF)
             15.95                        2.697                       (RUNOFF)
             16.95                        2.502                       (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6823        CFS-HRS=        65.14        ACRE-FT=        5.38

          CROSS SECTION   4
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	1162.645	(NULL)
19.45	147.695	(NULL)
21.65	141.265	(NULL)
23.65	136.099	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 5.6824 CFS-HRS= 4767.41 ACRE-FT= 393.98

SUBROUTINE REACH CROSS SECTION 5
LENGTH= 1030.00 INPUT COEFFICIENT= .8700 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 11.377 AVERAGE ROUTING COEFF= .8700 NUMBER OF ROUTINGS= .22

SUBROUTINE RUNOFF CROSS SECTION 5
AREA= .33 INPUT RUNOFF CURVE= 80.0 TIME OF CONCENTRATION= .47

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.12	326.939	(RUNOFF)
19.46	11.224	(RUNOFF)
21.58	9.662	(RUNOFF)
23.58	8.298	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0780 CFS-HRS= 442.56 ACRE-FT= 36.57

SUBROUTINE ADDHYD CROSS SECTION 5
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.20	1458.511	(NULL)
19.45	158.912	(NULL)
21.64	150.848	(NULL)
23.64	144.320	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 4.9530 CFS-HRS= 5210.27 ACRE-FT= 430.58

SUBROUTINE REACH CROSS SECTION 6
LENGTH= 600.00 INPUT COEFFICIENT= .8800 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 12.467 AVERAGE ROUTING COEFF= .8800 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 6
AREA= .05 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .13

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.97	56.379	(RUNOFF)
12.45	12.427	(RUNOFF)
12.95	6.519	(RUNOFF)
13.45	4.841	(RUNOFF)
13.95	3.801	(RUNOFF)
14.45	3.288	(RUNOFF)
14.95	2.955	(RUNOFF)

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15.95                          2.243                    (RUNOFF)
16.95                          2.080                    (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6936      CFS-HRS=      54.65      ACRE-FT=      4.52


SUBROUTINE ADDHYD    CROSS SECTION   6
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
   12.21                      1464.704                     (NULL)
   19.45                       160.456                     (NULL)
   21.64                       152.036                     (NULL)
   23.64                       145.324                     (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.8560      CFS-HRS=    5265.02      ACRE-FT=    435.10


SUBROUTINE REACH     CROSS SECTION   7
LENGTH=    720.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  12.467      AVERAGE ROUTING COEFF=  .8800      NUMBER OF ROUTINGS=   .14


SUBROUTINE RUNOFF    CROSS SECTION   7
AREA=    .69     INPUT RUNOFF CURVE=  80.0     TIME OF CONCENTRATION=   .58

PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
   12.19                       611.441                    (RUNOFF)
   21.63                        19.975                    (RUNOFF)
   23.63                        17.119                    (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.0791      CFS-HRS=     925.85      ACRE-FT=     76.51


SUBROUTINE ADDHYD    CROSS SECTION   7
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
   12.21                      2066.022                     (NULL)
   21.64                       171.976                     (NULL)
   23.64                       162.408                     (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.0477      CFS-HRS=    6191.02      ACRE-FT=    511.63


SUBROUTINE REACH     CROSS SECTION   8
LENGTH=    350.00     INPUT COEFFICIENT=   .9000     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  15.300      AVERAGE ROUTING COEFF=  .9000      NUMBER OF ROUTINGS=   .06


SUBROUTINE RUNOFF    CROSS SECTION   8
AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .07

PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
```

12.45	7.643	(RUNOFF)
12.95	3.967	(RUNOFF)
13.45	2.941	(RUNOFF)
13.95	2.298	(RUNOFF)
14.45	1.985	(RUNOFF)
14.95	1.785	(RUNOFF)
15.45	1.576	(RUNOFF)
15.95	1.351	(RUNOFF)
16.95	1.254	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6789 CFS-HRS= 32.51 ACRE-FT= 2.69

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.22	2067.384	(NULL)
21.65	172.647	(NULL)
23.65	162.968	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 4.0181 CFS-HRS= 6223.57 ACRE-FT= 514.32

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 9
AREA= 2.00 INPUT RUNOFF CURVE= 83.0 TIME OF CONCENTRATION= .41

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.09	2347.550	(RUNOFF)
19.39	71.641	(RUNOFF)
21.55	61.956	(RUNOFF)
23.55	53.181	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.3253 CFS-HRS= 3001.34 ACRE-FT= 248.03

SUBROUTINE ADDHYD CROSS SECTION 9
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.13	4272.460	(NULL)
19.38	256.431	(NULL)
21.59	234.288	(NULL)
23.59	215.850	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.2487 CFS-HRS= 9225.12 ACRE-FT= 762.36

SUBROUTINE REACH CROSS SECTION 10
LENGTH= 810.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

```
AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
AREA=    .17     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .33

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
   12.07                         157.086                     (RUNOFF)
   16.95                           7.025                     (RUNOFF)
   19.45                           5.221                     (RUNOFF)
   21.51                           4.570                     (RUNOFF)
   23.51                           3.943                     (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.7022        CFS-HRS=      186.76        ACRE-FT=      15.43

SUBROUTINE ADDHYD    CROSS SECTION  10
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
   12.14                        4386.975                      (NULL)
   19.39                         261.641                      (NULL)
   21.59                         238.719                      (NULL)
   23.59                         219.654                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.1912        CFS-HRS=     9411.87        ACRE-FT=     777.80

SUBROUTINE REACH     CROSS SECTION  11
LENGTH=    280.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .04

SUBROUTINE RUNOFF    CROSS SECTION  11
AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
   11.96                          35.520                     (RUNOFF)
   12.45                           7.554                     (RUNOFF)
   12.95                           3.940                     (RUNOFF)
   13.45                           2.921                     (RUNOFF)
   13.95                           2.289                     (RUNOFF)
   14.45                           1.979                     (RUNOFF)
   14.95                           1.779                     (RUNOFF)
   15.45                           1.571                     (RUNOFF)
   15.95                           1.348                     (RUNOFF)
   16.95                           1.251                     (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6823        CFS-HRS=       32.57        ACRE-FT=       2.69

SUBROUTINE ADDHYD    CROSS SECTION  11
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
```

19.39	262.561	(NULL)
21.59	239.409	(NULL)
23.59	220.234	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 4.60

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.01	105.07	105.32	105.80	106.48	107.28	108.15	109.05
8.00	DISCHG	109.97	110.98	112.21	113.65	115.20	116.78	118.48	120.40	122.51	124.69
9.00	DISCHG	126.86	129.26	132.19	135.64	139.24	142.76	146.43	150.73	155.62	160.64
10.00	DISCHG	165.49	171.04	178.46	187.53	196.90	205.65	215.60	229.07	245.55	262.43
11.00	DISCHG	278.23	297.73	327.11	364.54	403.19	450.98	645.64	1175.25	2001.10	2942.31
12.00	DISCHG	3822.84	4335.73	4288.74	3792.07	3156.37	2596.81	2152.36	1789.60	1491.03	1261.48
13.00	DISCHG	1095.91	975.59	879.17	798.93	736.83	692.03	656.08	622.00	588.91	560.84
14.00	DISCHG	540.04	523.03	506.68	490.62	476.77	466.41	457.43	448.09	438.38	429.72
15.00	DISCHG	423.16	416.76	409.05	400.36	392.34	386.08	379.83	372.11	363.37	355.33
16.00	DISCHG	349.05	343.67	338.33	332.99	328.38	324.90	322.48	320.93	319.98	319.45
17.00	DISCHG	319.14	318.04	315.59	312.06	308.56	305.73	302.79	299.04	294.65	290.58
18.00	DISCHG	287.39	284.19	280.27	275.77	271.62	268.43	266.17	264.67	263.73	263.16
19.00	DISCHG	262.83	262.65	262.57	262.55	262.56	262.54	261.60	259.18	255.65	252.09
20.00	DISCHG	249.25	247.19	245.82	244.95	244.41	244.02	242.84	240.23	236.59	233.00
21.00	DISCHG	230.15	229.06	230.14	232.84	235.90	238.48	239.41	238.25	235.52	232.46
22.00	DISCHG	229.89	228.04	226.76	225.95	225.45	225.10	223.88	221.29	217.60	213.92
23.00	DISCHG	211.07	210.00	211.06	213.76	216.84	219.33	220.23	219.07	216.35	213.26
24.00	DISCHG	210.34	203.40	189.43	170.49	151.63	136.55	125.52	118.10	113.25	110.18
25.00	DISCHG	108.24	107.01	106.24	105.75	105.45	105.27	105.16	105.08	105.04	105.01
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.1813 CFS-HRS= 9444.43 ACRE-FT= 780.49

SUBROUTINE REACH CROSS SECTION 12
LENGTH= 440.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 12
AREA= .32 INPUT RUNOFF CURVE= 79.0 TIME OF CONCENTRATION= .34

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.06	344.800	(RUNOFF)
16.95	14.456	(RUNOFF)
19.45	10.686	(RUNOFF)
21.51	9.315	(RUNOFF)
23.52	8.025	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0000 CFS-HRS= 413.04 ACRE-FT= 34.13

```
SUBROUTINE ADDHYD    CROSS SECTION  12
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.14                       4687.683                     (NULL)
              19.39                        273.233                     (NULL)
              21.59                        248.602                     (NULL)
              23.59                        228.146                     (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.1045        CFS-HRS=     9857.50        ACRE-FT=     814.62

SUBROUTINE REACH     CROSS SECTION  13
           LENGTH=    970.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .14

SUBROUTINE RUNOFF    CROSS SECTION  13
           AREA=    .11     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .12

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              11.97                       125.874                    (RUNOFF)
              12.45                        27.398                    (RUNOFF)
              12.95                        14.389                    (RUNOFF)
              13.45                        10.671                    (RUNOFF)
              13.95                         8.371                    (RUNOFF)
              14.45                         7.243                    (RUNOFF)
              14.95                         6.506                    (RUNOFF)
              15.45                         5.744                    (RUNOFF)
              15.95                         4.937                    (RUNOFF)
              16.95                         4.579                    (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6903        CFS-HRS=      120.00        ACRE-FT=       9.92

SUBROUTINE ADDHYD    CROSS SECTION  13
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.15                       4691.604                     (NULL)
              19.40                        276.608                     (NULL)
              21.60                        251.191                     (NULL)
              23.59                        230.334                     (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.0736        CFS-HRS=     9977.52        ACRE-FT=     824.54

SUBROUTINE REACH     CROSS SECTION  14
           LENGTH=       .00     INPUT COEFFICIENT=340.0000     INPUT ROUTINGS=   .91

           AVERAGE WATER VELOCITY=    .000       AVERAGE ROUTING COEFF=  .0000       NUMBER OF ROUTINGS=   .00

SUBROUTINE RUNOFF    CROSS SECTION  14
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.09	752.894	(RUNOFF)
16.95	32.735	(RUNOFF)
19.41	24.131	(RUNOFF)
21.55	20.936	(RUNOFF)
23.55	18.004	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0794 CFS-HRS= 952.80 ACRE-FT= 78.74

SUBROUTINE ADDHYD CROSS SECTION 14
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.14	5426.918	(NULL)
19.40	300.738	(NULL)
21.59	272.089	(NULL)
23.59	248.297	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 5.74

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.01	105.06	105.27	105.70	106.34	107.12	107.97	108.86
8.00	DISCHG	109.78	110.77	111.96	113.40	115.05	116.85	118.86	121.18	123.79	126.54
9.00	DISCHG	129.33	132.35	135.96	140.17	144.60	148.96	153.47	158.75	164.75	170.92
10.00	DISCHG	176.92	183.76	192.83	203.92	215.40	226.19	238.50	255.09	275.37	296.18
11.00	DISCHG	315.61	339.98	376.41	422.69	470.41	527.48	782.45	1456.42	2497.76	3679.13
12.00	DISCHG	4783.92	5382.58	5281.95	4628.55	3825.95	3145.83	2604.55	2161.22	1796.30	1515.52
13.00	DISCHG	1316.47	1170.81	1053.95	956.53	881.63	828.12	784.60	742.87	702.31	668.02
14.00	DISCHG	642.85	622.06	601.81	582.00	565.02	552.55	541.51	529.87	517.85	507.28
15.00	DISCHG	499.33	491.36	481.65	470.82	460.96	453.38	445.58	435.87	424.91	414.97
16.00	DISCHG	407.38	400.79	394.16	387.56	381.90	377.71	374.83	372.99	371.88	371.26
17.00	DISCHG	370.91	369.44	366.25	361.81	357.47	354.04	350.34	345.59	340.12	335.09
18.00	DISCHG	331.23	327.23	322.27	316.66	311.56	307.68	304.97	303.18	302.07	301.40
19.00	DISCHG	301.02	300.82	300.73	300.71	300.74	300.71	299.42	296.26	291.81	287.39
20.00	DISCHG	283.93	281.45	279.81	278.77	278.14	277.70	276.11	272.73	268.12	263.64
21.00	DISCHG	260.18	259.05	260.63	264.11	267.96	271.09	272.07	270.40	266.89	263.08
22.00	DISCHG	259.94	257.70	256.18	255.21	254.61	254.20	252.59	249.20	244.53	239.96
23.00	DISCHG	236.50	235.38	236.94	240.42	244.28	247.34	248.27	246.59	243.08	239.23
24.00	DISCHG	235.75	226.49	208.42	184.34	160.90	142.59	129.38	120.49	114.71	111.05
25.00	DISCHG	108.76	107.32	106.42	105.86	105.52	105.31	105.18	105.10	105.05	105.02
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.9506 CFS-HRS= 10930.32 ACRE-FT= 903.28

ENDCMP

SUMMARY TABLE 1

ALT	STORM	ID	DA SQ-MI.	RAIN TBLE	AMC	DELTA-T HRS.	TZERO HRS.	PRECIP IN.	PRECIP DURATION	PEAK-Q CFS	PEAK-TIME	PEAK-ELEV	RUNOFF IN.	CSM
1	1	1 4A	.47	2	2	.10	.00	1.45	24.00	29.99	12.28	.00	.21	63.81
1	1	2	.47	2	2	.10	.00	1.45	24.00	134.56	12.33	.00	10.56	286.29
1	1	2 4B	.62	2	2	.10	.00	1.45	24.00	39.03	12.29	.00	.21	62.94
1	1	2	1.09	2	2	.10	.00	1.45	24.00	173.39	12.31	.00	4.67	159.07
1	1	3 4C	.15	2	2	.10	.00	1.45	24.00	16.67	12.20	.00	.29	111.16
1	1	3	1.24	2	2	.10	.00	1.45	24.00	187.80	12.30	.00	4.14	151.45
1	1	4 4D	.06	2	2	.10	.00	1.45	24.00	4.80	12.00	.00	.15	80.03
1	1	4	1.30	2	2	.10	.00	1.45	24.00	188.41	12.32	.00	3.96	144.93
1	1	5 4E	.33	2	2	.10	.00	1.45	24.00	31.80	12.20	.00	.26	96.35
1	1	5	1.63	2	2	.10	.00	1.45	24.00	215.58	12.30	.00	3.21	132.26
1	1	6 4F	.05	2	2	.10	.00	1.45	24.00	3.55	12.02	.00	.15	70.97
1	1	6	1.68	2	2	.10	.00	1.45	24.00	216.12	12.32	.00	3.12	128.64
1	1	7 4G	.69	2	2	.10	.00	1.45	24.00	57.92	12.29	.00	.26	83.95
1	1	7	2.37	2	2	.10	.00	1.45	24.00	272.80	12.32	.00	2.29	115.10
1	1	8 4H	.03	2	2	.10	.00	1.45	24.00	2.70	11.99	.00	.15	90.03
1	1	8	2.40	2	2	.10	.00	1.45	24.00	273.00	12.32	.00	2.26	113.75
1	1	9 5A	2.00	2	2	.10	.00	1.45	24.00	310.30	12.14	.00	.35	155.15
1	1	9	4.40	2	2	.10	.00	1.45	24.00	551.80	12.19	.00	1.39	125.41
1	1	10 5B	.17	2	2	.10	.00	1.45	24.00	7.93	12.15	.00	.15	46.67
1	1	10	4.57	2	2	.10	.00	1.45	24.00	556.04	12.20	.00	1.35	121.67
1	1	11 5C	.03	2	2	.10	.00	1.45	24.00	2.40	12.00	.00	.15	80.03
1	1	11	4.60	2	2	.10	.00	1.45	24.00	555.39	12.21	.00	1.34	120.74
1	1	12 6A	.32	2	2	.10	.00	1.45	24.00	31.85	12.13	.00	.24	99.52
1	1	12	4.92	2	2	.10	.00	1.45	24.00	581.84	12.21	.00	1.27	118.26
1	1	13 6B	.11	2	2	.10	.00	1.45	24.00	8.10	12.01	.00	.15	73.61
1	1	13	5.03	2	2	.10	.00	1.45	24.00	579.99	12.22	.00	1.24	115.31
1	1	14 6C	.71	2	2	.10	.00	1.45	24.00	74.83	12.16	.00	.26	105.40
1	1	14	5.74	2	2	.10	.00	1.45	24.00	652.51	12.21	.00	1.12	113.68
1	1	1 4A	.47	2	2	.10	.00	2.58	24.00	163.38	12.20	.00	.84	347.62
1	1	2	.47	2	2	.10	.00	2.58	24.00	265.29	12.24	.00	11.19	564.44
1	1	2 4B	.62	2	2	.10	.00	2.58	24.00	215.38	12.21	.00	.84	347.39
1	1	2	1.09	2	2	.10	.00	2.58	24.00	479.87	12.22	.00	5.30	440.25
1	1	3 4C	.15	2	2	.10	.00	2.58	24.00	69.22	12.14	.00	1.00	461.46
1	1	3	1.24	2	2	.10	.00	2.58	24.00	542.38	12.22	.00	4.78	437.41
1	1	4 4D	.06	2	2	.10	.00	2.58	24.00	29.22	11.97	.00	.69	486.94
1	1	4	1.30	2	2	.10	.00	2.58	24.00	542.85	12.24	.00	4.59	417.58
1	1	5 4E	.33	2	2	.10	.00	2.58	24.00	142.57	12.15	.00	.94	432.03
1	1	5	1.63	2	2	.10	.00	2.58	24.00	670.31	12.23	.00	3.85	411.23
1	1	6 4F	.05	2	2	.10	.00	2.58	24.00	22.84	11.98	.00	.69	456.71
1	1	6	1.68	2	2	.10	.00	2.58	24.00	671.99	12.24	.00	3.76	399.99
1	1	7 4G	.69	2	2	.10	.00	2.58	24.00	265.18	12.22	.00	.94	384.32
1	1	7	2.37	2	2	.10	.00	2.58	24.00	932.01	12.24	.00	2.94	393.25
1	1	8 4H	.03	2	2	.10	.00	2.58	24.00	15.42	11.97	.00	.69	514.07
1	1	8	2.40	2	2	.10	.00	2.58	24.00	932.42	12.24	.00	2.91	388.51
1	1	9 5A	2.00	2	2	.10	.00	2.58	24.00	1109.32	12.10	.00	1.11	554.66
1	1	9	4.40	2	2	.10	.00	2.58	24.00	1962.99	12.15	.00	2.09	446.13
1	1	10 5B	.17	2	2	.10	.00	2.58	24.00	60.59	12.09	.00	.70	356.39
1	1	10	4.57	2	2	.10	.00	2.58	24.00	1997.60	12.16	.00	2.04	437.11
1	1	11 5C	.03	2	2	.10	.00	2.58	24.00	14.61	11.97	.00	.69	486.94
1	1	11	4.60	2	2	.10	.00	2.58	24.00	1996.77	12.16	.00	2.03	434.08
1	1	12 6A	.32	2	2	.10	.00	2.58	24.00	149.02	12.08	.00	.89	465.68
1	1	12	4.92	2	2	.10	.00	2.58	24.00	2124.02	12.16	.00	1.96	431.71

2-YEAR, 24-HR

10-YEAR, 24-HR

1	1	13	5.03	2	2	.10	.00	2.58	24.00	2124.52	12.17	.00	1.93	422.37
1	1	~~14~~6C	.71	2	2	.10	.00	2.58	24.00	331.00	12.11	.00	.94	466.20
1	1	14	5.74	2	2	.10	.00	2.58	24.00	2443.64	12.16	.00	1.81	425.72
1	3	~~1~~4A	.47	2	2	.10	.00	4.05	24.00	397.26	12.17	.00	1.92	845.24
1	3	2	.47	2	2	.10	.00	4.05	24.00	495.85	12.22	.00	12.27	1054.99
1	3	~~2~~4B	.62	2	2	.10	.00	4.05	24.00	524.59	12.18	.00	1.93	846.12
1	3	2	1.09	2	2	.10	.00	4.05	24.00	1018.89	12.20	.00	6.39	934.76
1	3	~~3~~4C	.15	2	2	.10	.00	4.05	24.00	154.66	12.12	.00	2.16	1031.10
1	3	3	1.24	2	2	.10	.00	4.05	24.00	1159.76	12.19	.00	5.88	935.29
1	3	~~4~~4D	.06	2	2	.10	.00	4.05	24.00	71.04	11.96	.00	1.68	1184.00
1	3	4	1.30	2	2	.10	.00	4.05	24.00	1162.64	12.21	.00	5.68	894.34
1	3	~~5~~4E	.33	2	2	.10	.00	4.05	24.00	326.94	12.12	.00	2.08	990.72
1	3	5	1.63	2	2	.10	.00	4.05	24.00	1458.51	12.20	.00	4.95	894.79
1	3	~~6~~4F	.05	2	2	.10	.00	4.05	24.00	56.38	11.97	.00	1.69	1127.58
1	3	6	1.68	2	2	.10	.00	4.05	24.00	1464.70	12.21	.00	4.86	871.85
1	3	~~7~~4G	.69	2	2	.10	.00	4.05	24.00	611.44	12.19	.00	2.08	886.15
1	3	7	2.37	2	2	.10	.00	4.05	24.00	2066.02	12.21	.00	4.05	871.74
1	3	~~8~~4H	.03	2	2	.10	.00	4.05	24.00	36.94	11.96	.00	1.68	1231.34
1	3	8	2.40	2	2	.10	.00	4.05	24.00	2067.38	12.22	.00	4.02	861.41
1	3	~~9~~5A	2.00	2	2	.10	.00	4.05	24.00	2347.55	12.09	.00	2.33	1173.77
1	3	9	4.40	2	2	.10	.00	4.05	24.00	4272.46	12.13	.00	3.25	971.01
1	3	~~10~~5B	.17	2	2	.10	.00	4.05	24.00	157.09	12.07	.00	1.70	924.04
1	3	10	4.57	2	2	.10	.00	4.05	24.00	4386.97	12.14	.00	3.19	959.95
1	3	~~11~~5C	.03	2	2	.10	.00	4.05	24.00	35.52	11.96	.00	1.68	1184.00
1	3	~~11~~	4.60	2	2	.10	.00	4.05	24.00	4384.19	12.14	.00	3.18	953.09
1	3	~~12~~6A	.32	2	2	.10	.00	4.05	24.00	344.80	12.06	.00	2.00	1077.50
1	3	12	4.92	2	2	.10	.00	4.05	24.00	4687.68	12.14	.00	3.10	952.78
1	3	~~13~~6B	.11	2	2	.10	.00	4.05	24.00	125.87	11.97	.00	1.69	1144.31
1	3	13	5.03	2	2	.10	.00	4.05	24.00	4691.60	12.15	.00	3.07	932.72
1	3	~~14~~6C	.71	2	2	.10	.00	4.05	24.00	752.89	12.09	.00	2.08	1060.41
1	3	14	5.74	2	2	.10	.00	4.05	24.00	5426.92	12.14	.00	2.95	945.46

100-YEAR, 24-HOUR

SUMMARY TABLE 3

	10-YEAR Q1	100-YR Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	DISCHARGE,CFS									
XSEC/STRUC NO. 1 ALTERNATE 1	163.38	397.26	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 2 ALTERNATE 1	479.87	1018.89	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 3 ALTERNATE 1	542.38	1159.76	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 4 ALTERNATE 1	542.85	1162.64	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 5 ALTERNATE 1	670.31	1458.51	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 6 ALTERNATE 1	671.99	1464.70	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 7 ALTERNATE 1	932.01	2066.02	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 8 ALTERNATE 1	932.42	2067.38	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 9 ALTERNATE 1	1962.99	4272.46	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 10 ALTERNATE 1	1997.60	4386.97	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 11 ALTERNATE 1	1996.77	4384.19	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 12 ALTERNATE 1	2124.02	4687.68	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 13 ALTERNATE 1	2124.52	4691.60	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 14 ALTERNATE 1	2443.64	5426.92	.00	.00	.00	.00	.00	.00	.00	.00

ENDJOB CARD ENCOUNTERED. END OF JOB.

BULLDOG WASH, DESIGN HYDROLOGY 04/23/85

TR-20 HYDROLOGY

USING "MAXIMUM" DRAINAGE AREAS TO INLETS 4A, 4B, 4C, 4E 4G & 5A.

BUCKHORN MESA W/S
BULLDOG WASH FLOODWAY
INLET DESIGN HYDROLOGY
2-YEAR, 24-HOUR
10-YEAR, 24-HOUR
100-YEAR, 24-HOUR

(DES/TR20. ADWK)
4/24/85

NOTES!!

1.) 105CFS Base Flow (P. Spy Flow) From Apache Junction FRS was Added to Each storm based on Work Plan Supplement dated June 1976

Impt!! 2) This Run should be used only to Estimate MAXIMUM Discharges for Inlets to Subareas 4A, 4B, 4C, 4E, 4G, & 5A. Do "Not" use This Run to Estimate Peak flows Along the Floodway since the Accumulation D.A.'S are in Error due

EXECUTIVE CONTROL CARD 33 OPERATION LIST

LISTING OF DATA IN CORE

0 BULLDOG WASH,DESIGN HYDROLOGY

VELOCITY INCREMENT

1 CTABLE .2000

8	.0000	.0800	.1800	.2500	.3200
8	.3700	.4100	.4500	.4900	.5100
8	.5400	.5700	.5900	.6100	.6300
8	.6500	.6600	.6700	.6900	.7000
8	.7100	.7200	.7300	.7400	.7500
8	.7600	.7700	.7700	.7800	.7900
8	.7900	.8000	.8100	.8100	.8200
8	.8200	.8300	.8300	.8400	.8400
8	.8400	.8500	.8500	.8600	.8600
8	.8600	.8600	.8700	.8700	.8700
8	.8800	.8800	.8800	.8900	.8900
8	.8900	.8900	.8900	.8900	.9000
8	.9000	.9000	.9000	.9000	.9100
8	.9100	.9100	.9100	.9100	.9100
8	.9200	.9200	.9200	.9200	.9200
8	.9200	.9200	.9200	.9300	.9300

9 ENDTBL

TIME INCREMENT

4 DIMHYD

8	.0000	.0300	.1000	.1900	.3100
8	.4700	.6600	.8200	.9300	.9900
8	1.0000	.9900	.9300	.8600	.7800
8	.6800	.5600	.4600	.3900	.3300
8	.2800	.2410	.2070	.1740	.1470
8	.1260	.1070	.0910	.0770	.0660
8	.0550	.0470	.0400	.0340	.0290
8	.0250	.0210	.0180	.0150	.0130
8	.0110	.0090	.0080	.0070	.0060
8	.0050	.0040	.0030	.0020	.0010
8	.0000	.0000	.0000	.0000	.0000

9 ENDTBL

COMPUTED PEAK K FACTOR = 484.00

TIME INCREMENT

```
8          .0000      .0080      .0170      .0260      .0350
8          .0450      .0550      .0650      .0760      .0870
8          .0990      .1120      .1250      .1400      .1560
8          .1740      .1940      .2190      .2540      .3030
8          .5150      .5830      .6240      .6540      .6820
8          .7050      .7270      .7480      .7670      .7840
8          .8000      .8160      .8300      .8440      .8570
8          .8700      .8820      .8930      .9050      .9160
8          .9260      .9360      .9460      .9550      .9650
8          .9740      .9830      .9920     1.0000     1.0000
9 ENDTBL

                TIME INCREMENT
5 RAINFL 2                .5000

8          .0000      .0050      .0110      .0160      .0220
8          .0280      .0350      .0410      .0480      .0560
8          .0630      .0710      .0800      .0890      .0980
8          .1090      .1200      .1330      .1470      .1630
8          .1810      .2040      .2350      .2830      .6630
8          .7350      .7720      .7990      .8200      .8380
8          .8540      .8680      .8800      .8910      .9020
8          .9120      .9210      .9290      .9370      .9450
8          .9520      .9590      .9650      .9720      .9780
8          .9840      .9890      .9950     1.0000     1.0000
9 ENDTBL

                TIME INCREMENT
5 RAINFL 3                .0200

8          .0000      .0080      .0162      .0246      .0333
8          .0425      .0524      .0630      .0743      .0863
8          .0990      .1124      .1265      .1420      .1600
8          .1800      .2050      .2550      .3450      .4370
8          .5300      .6030      .6330      .6600      .6840
8          .7050      .7240      .7420      .7590      .7750
8          .7900      .8043      .8180      .8312      .8439
8          .8561      .8678      .8790      .8898      .9002
8          .9103      .9201      .9297      .9391      .9483
8          .9573      .9661      .9747      .9832      .9916
8         1.0000     1.0000     1.0000     1.0000     1.0000
9 ENDTBL
```

STANDARD CONTROL INSTRUCTIONS

```
6 RUNOFF 1   1       6        .8900     79.0000      .54001 0 0 1 0 1
6 REACH  3   2   6   5    1700.0000       .8600      .00001 0 0 1 0 1
6 RUNOFF 1   2       6        .9900     79.0000      .56001 0 0 1 0 1
6 ADDHYD 4   2   5 6 7                                    1 0 0 1 0 1
6 REACH  3   3   7   5     540.0000       .8600      .00000 0 0 0 0 0
6 RUNOFF 1   3       6        .4500     81.0000      .47001 0 0 1 0 1
6 ADDHYD 4   3   5 6 7                                    1 0 0 1 0 1
6 REACH  3   4   7   5    1000.0000       .8700      .00000 0 0 0 0 0
6 RUNOFF 1   4       6        .0600     75.0000      .19001 0 0 1 0 1
6 ADDHYD 4   4   5 6 7                                    1 0 0 1 0 1
6 REACH  3   5   7   5    1030.0000       .8700      .00000 0 0 0 0 0
6 RUNOFF 1   5       6        .5000     81.0000      .47001 0 0 1 0 1
6 ADDHYD 4   5   5 6 7                                    1 0 0 1 0 1
6 REACH  3   6   7   5     600.0000       .8800      .00000 0 0 0 0 0
6 RUNOFF 1   6       6        .0500     75.0000      .13001 0 0 1 0 1
6 ADDHYD 4   6   5 6 7                                    1 0 0 1 0 1
6 REACH  3   7   7   5     720.0000       .8800      .00000 0 0 0 0 0
6 RUNOFF 1   7       6       1.0400     81.0000      .58001 0 0 1 0 1
6 ADDHYD 4   7   5 6 7                                    1 0 0 1 0 1
6 REACH  3   8   7   5     350.0000       .9000      .00000 0 0 0 0 0
6 RUNOFF 1   8       6        .0300     75.0000      .07001 0 0 1 0 1
6 ADDHYD 4   8   5 6 7                                    1 0 0 1 0 1
6 REACH  3   9   7   5     750.0000       .9000      .00000 0 0 0 0 0
6 RUNOFF 1   9       6       2.2400     83.0000      .41001 0 0 1 0 1
6 ADDHYD 4   9   5 6 7                                    1 0 0 1 0 1
6 REACH  3  10   7   5     810.0000       .9100      .00000 0 0 0 0 0
6 RUNOFF 1  10       6        .1700     75.0000      .33001 0 0 1 0 1
6 ADDHYD 4  10   5 6 7                                    1 0 0 1 0 1
6 REACH  3  11   7   5     280.0000       .9100      .00000 0 0 0 0 0
6 RUNOFF 1  11       6        .0300     75.0000      .10001 0 0 1 0 1
6 ADDHYD 4  11   5 6 7                                    1 1 0 1 0 1
6 REACH  3  12   7   5     440.0000       .9100      .00000 0 0 0 0 0
6 RUNOFF 1  12       6        .3200     79.0000      .34001 0 0 1 0 1
6 ADDHYD 4  12   5 6 7                                    1 0 0 1 0 1
6 REACH  3  13   7   5     970.0000       .9100      .00000 0 0 0 0 0
6 RUNOFF 1  13       6        .1100     75.0000      .12001 0 0 1 0 1
6 ADDHYD 4  13   5 6 7                                    1 0 0 1 0 1
6 REACH  3  14   7   5        .0000    340.0000      .91000 0 0 0 0 0
6 RUNOFF 1  14       6        .7100     80.0000      .40001 0 0 1 0 1
6 ADDHYD 4  14   5 6 7                                    1 1 0 1 0 1
  ENDATA
```

END OF LISTING

```
                                                                                                PASS=  1
EXECUTIVE CONTROL CARD        34   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********    OPERATION
EXECUTIVE CONTROL CARD        35   OPERATION  INCREM,     MAIN TIME INCREMENT=   .10
EXECUTIVE CONTROL CARD        36   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  14/  0
        STARTING TIME=   .00      RAIN DEPTH=  1.45     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
        ALTERNATE NO.= 1          STORM NO.= 1


SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=    .89     INPUT RUNOFF CURVE=  79.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.27                         66.964                       (RUNOFF)
              16.96                          7.266                       (RUNOFF)
              19.47                          5.569                       (RUNOFF)
              21.62                          4.877                       (RUNOFF)
              23.62                          4.267                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2355        CFS-HRS=      135.28        ACRE-FT=      11.18


SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1700.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.32                        171.007                        (NULL)
              19.49                        110.566                        (NULL)
              21.66                        109.866                        (NULL)
              23.66                        109.256                        (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   5.7014        CFS-HRS=     3274.78        ACRE-FT=     270.63


SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=    .99     INPUT RUNOFF CURVE=  79.0     TIME OF CONCENTRATION=   .56

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.27                         73.663                       (RUNOFF)
              16.97                          8.087                       (RUNOFF)
              19.48                          6.195                       (RUNOFF)
              21.63                          5.427                       (RUNOFF)
              23.63                          4.732                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2354        CFS-HRS=      150.40        ACRE-FT=      12.43


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.29                        244.226                        (NULL)
              16.96                        120.352                        (NULL)
              19.48                        116.761                        (NULL)
```

```
23.64                          113.985                          (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.8230        CFS-HRS=     3425.18        ACRE-FT=     283.06

SUBROUTINE REACH     CROSS SECTION   3
           LENGTH=    540.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION   3
           AREA=    .45     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .47

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.20                           50.022                        (RUNOFF)
   16.98                            4.198                        (RUNOFF)
   19.47                            3.197                        (RUNOFF)
   21.58                            2.805                        (RUNOFF)
   23.58                            2.444                        (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2886        CFS-HRS=       83.81        ACRE-FT=       6.93

SUBROUTINE ADDHYD    CROSS SECTION   3
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.28                          288.911                        (NULL)
   16.96                          124.550                        (NULL)
   19.48                          119.956                        (NULL)
   21.64                          118.076                        (NULL)
   23.64                          116.409                        (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.3336        CFS-HRS=     3508.99        ACRE-FT=     289.98

SUBROUTINE REACH     CROSS SECTION   4
           LENGTH=   1000.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF    CROSS SECTION   4
           AREA=    .06     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.00                            4.902                        (RUNOFF)
   12.46                            1.616                        (RUNOFF)
   12.96                             .932                        (RUNOFF)
   13.46                             .730                        (RUNOFF)
   13.96                             .595                        (RUNOFF)
   14.46                             .530                        (RUNOFF)
   14.96                             .488                        (RUNOFF)
   15.45                             .440                        (RUNOFF)
   15.96                             .384                        (RUNOFF)
```

```
TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1476        CFS-HRS=        5.72        ACRE-FT=        .47

SUBROUTINE ADDHYD    CROSS SECTION    4
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.30                         288.531                      (NULL)
              16.95                         124.916                      (NULL)
              19.48                         120.237                      (NULL)
              21.65                         118.284                      (NULL)
              23.65                         116.588                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.2787        CFS-HRS=     3514.72        ACRE-FT=     290.46

SUBROUTINE REACH     CROSS SECTION    5
           LENGTH=   1030.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .22

SUBROUTINE RUNOFF    CROSS SECTION    5
           AREA=    .50     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .47

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                          55.580                     (RUNOFF)
              16.98                           4.665                     (RUNOFF)
              19.47                           3.552                     (RUNOFF)
              21.58                           3.117                     (RUNOFF)
              23.58                           2.716                     (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2886        CFS-HRS=       93.12        ACRE-FT=       7.70

SUBROUTINE ADDHYD    CROSS SECTION    5
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.30                         335.954                      (NULL)
              16.95                         129.581                      (NULL)
              19.48                         123.784                      (NULL)
              21.65                         121.364                      (NULL)
              23.65                         119.267                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.9344        CFS-HRS=     3607.86        ACRE-FT=     298.15

SUBROUTINE REACH     CROSS SECTION    6
           LENGTH=    600.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION    6
           AREA=    .05     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .13
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.02	3.548	(RUNOFF)
12.47	1.318	(RUNOFF)
12.96	.768	(RUNOFF)
13.46	.604	(RUNOFF)
13.96	.493	(RUNOFF)
14.46	.440	(RUNOFF)
14.96	.405	(RUNOFF)
15.46	.365	(RUNOFF)
15.96	.319	(RUNOFF)
16.96	.305	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1484 CFS-HRS= 4.79 ACRE-FT= .40

SUBROUTINE ADDHYD CROSS SECTION 6
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.31	335.749	(NULL)
19.48	124.018	(NULL)
21.66	121.544	(NULL)
23.66	119.422	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.9040 CFS-HRS= 3612.65 ACRE-FT= 298.55

SUBROUTINE REACH CROSS SECTION 7
LENGTH= 720.00 INPUT COEFFICIENT= .8800 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 12.467 AVERAGE ROUTING COEFF= .8800 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 7
AREA= 1.04 INPUT RUNOFF CURVE= 81.0 TIME OF CONCENTRATION= .58

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.27	100.871	(RUNOFF)
19.47	7.378	(RUNOFF)
21.64	6.408	(RUNOFF)
23.63	5.572	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .2887 CFS-HRS= 193.76 ACRE-FT= 16.01

SUBROUTINE ADDHYD CROSS SECTION 7
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.31	434.006	(NULL)
19.48	131.392	(NULL)
21.66	127.935	(NULL)
23.66	124.976	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.4819 CFS-HRS= 3806.41 ACRE-FT= 314.56

```
SUBROUTINE REACH      CROSS SECTION   8
          LENGTH=    350.00      INPUT COEFFICIENT=   .9000      INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  15.300        AVERAGE ROUTING COEFF=  .9000        NUMBER OF ROUTINGS=   .06


SUBROUTINE RUNOFF     CROSS SECTION   8
          AREA=    .03      INPUT RUNOFF CURVE=  75.0      TIME OF CONCENTRATION=   .07

          PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
             11.99                            2.701                        (RUNOFF)
             12.46                             .825                        (RUNOFF)
             12.96                             .471                        (RUNOFF)
             13.46                             .369                        (RUNOFF)
             13.96                             .299                        (RUNOFF)
             14.46                             .266                        (RUNOFF)
             14.96                             .245                        (RUNOFF)
             15.45                             .221                        (RUNOFF)
             15.96                             .193                        (RUNOFF)
             16.95                             .184                        (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1479        CFS-HRS=        2.86        ACRE-FT=        .24


SUBROUTINE ADDHYD     CROSS SECTION   8
          INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

          PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
             12.31                          433.681                        (NULL)
             19.48                          131.534                        (NULL)
             21.67                          128.039                        (NULL)
             23.66                          125.064                        (NULL)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.4719        CFS-HRS=     3809.28        ACRE-FT=     314.80


SUBROUTINE REACH      CROSS SECTION   9
          LENGTH=    750.00      INPUT COEFFICIENT=   .9000      INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  15.300        AVERAGE ROUTING COEFF=  .9000        NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF     CROSS SECTION   9
          AREA=   2.24      INPUT RUNOFF CURVE=  83.0      TIME OF CONCENTRATION=   .41

          PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
             12.14                          347.535                        (RUNOFF)
             16.97                           23.642                        (RUNOFF)
             19.46                           17.881                        (RUNOFF)
             21.55                           15.718                        (RUNOFF)
             23.55                           13.667                        (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .3499        CFS-HRS=      505.76        ACRE-FT=      41.80


SUBROUTINE ADDHYD     CROSS SECTION   9
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.22	734.059	(NULL)
16.96	163.430	(NULL)
19.47	149.408	(NULL)
21.61	143.617	(NULL)
23.61	138.596	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.0698 CFS-HRS= 4315.05 ACRE-FT= 356.60

SUBROUTINE REACH CROSS SECTION 10
LENGTH= 810.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 10
AREA= .17 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .33

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.15	7.934	(RUNOFF)
16.99	1.025	(RUNOFF)
19.46	.803	(RUNOFF)
20.46	.719	(RUNOFF)
21.53	.726	(RUNOFF)
22.45	.640	(RUNOFF)
23.51	.640	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1489 CFS-HRS= 16.34 ACRE-FT= 1.35

SUBROUTINE ADDHYD CROSS SECTION 10
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.23	736.663	(NULL)
16.95	164.453	(NULL)
19.47	150.203	(NULL)
21.62	144.301	(NULL)
23.61	139.194	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.0454 CFS-HRS= 4331.36 ACRE-FT= 357.94

SUBROUTINE REACH CROSS SECTION 11
LENGTH= 280.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .04

SUBROUTINE RUNOFF CROSS SECTION 11
AREA= .03 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .10

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.00	2.401	(RUNOFF)
12.46	.808	(RUNOFF)

13.46	.365	(RUNOFF)
13.96	.297	(RUNOFF)
14.46	.265	(RUNOFF)
14.96	.244	(RUNOFF)
15.45	.220	(RUNOFF)
15.96	.192	(RUNOFF)
16.95	.183	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1476 CFS-HRS= 2.86 ACRE-FT= .24

SUBROUTINE ADDHYD CROSS SECTION 11
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.23	735.453	(NULL)
16.95	164.637	(NULL)
19.47	150.344	(NULL)
21.62	144.403	(NULL)
23.62	139.281	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 6.45

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
10.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
11.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.13	108.85	134.52	201.58	325.63
12.00	DISCHG	495.76	654.68	730.75	713.81	647.55	576.13	513.75	457.72	407.14	365.42
13.00	DISCHG	333.96	310.63	291.42	274.81	261.51	251.73	243.98	236.56	229.09	222.52
14.00	DISCHG	217.52	213.54	209.76	206.00	202.69	200.19	198.12	195.99	193.73	191.66
15.00	DISCHG	190.08	188.62	186.86	184.79	182.81	181.23	179.74	177.89	175.72	173.66
16.00	DISCHG	172.01	170.63	169.29	167.94	166.76	165.85	165.24	164.87	164.68	164.61
17.00	DISCHG	164.62	164.46	163.94	163.11	162.22	161.48	160.75	159.82	158.69	157.61
18.00	DISCHG	156.73	155.90	154.89	153.71	152.58	151.68	151.04	150.62	150.37	150.24
19.00	DISCHG	150.19	150.18	150.20	150.24	150.29	150.34	150.17	149.60	148.69	147.71
20.00	DISCHG	146.90	146.29	145.90	145.66	145.52	145.44	145.18	144.53	143.56	142.55
21.00	DISCHG	141.72	141.32	141.54	142.27	143.17	143.99	144.39	144.21	143.52	142.68
22.00	DISCHG	141.93	141.37	140.99	140.75	140.61	140.52	140.24	139.58	138.57	137.51
23.00	DISCHG	136.65	136.24	136.45	137.18	138.09	138.88	139.27	139.07	138.37	137.50
24.00	DISCHG	136.63	134.84	131.07	125.70	120.09	115.38	111.83	109.39	107.77	106.75
25.00	DISCHG	106.10	105.69	105.43	105.26	105.15	105.09	105.05	105.03	105.01	105.00
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.0412 CFS-HRS= 4334.21 ACRE-FT= 358.18

LENGTH= 440.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 12
AREA= .32 INPUT RUNOFF CURVE= 79.0 TIME OF CONCENTRATION= .34

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.13	31.848	(RUNOFF)
16.98	2.616	(RUNOFF)
19.46	2.009	(RUNOFF)
20.45	1.788	(RUNOFF)
21.52	1.791	(RUNOFF)
22.45	1.577	(RUNOFF)
23.52	1.570	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .2353 CFS-HRS= 48.60 ACRE-FT= 4.02

SUBROUTINE ADDHYD CROSS SECTION 12
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.23	759.670	(NULL)
16.95	167.252	(NULL)
19.47	152.349	(NULL)
21.62	146.155	(NULL)
23.61	140.813	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.0031 CFS-HRS= 4382.80 ACRE-FT= 362.19

SUBROUTINE REACH CROSS SECTION 13
LENGTH= 970.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 13
AREA= .11 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .12

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.01	8.097	(RUNOFF)
12.46	2.914	(RUNOFF)
12.96	1.698	(RUNOFF)
13.46	1.332	(RUNOFF)
13.96	1.087	(RUNOFF)
14.46	.969	(RUNOFF)
14.96	.892	(RUNOFF)
15.46	.804	(RUNOFF)
15.96	.703	(RUNOFF)
16.96	.671	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1482 CFS-HRS= 10.52 ACRE-FT= .87

SUBROUTINE ADDHYD CROSS SECTION 13
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.25	756.045	(NULL)
19.47	152.864	(NULL)
21.63	146.540	(NULL)
23.62	141.142	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9895 CFS-HRS= 4393.31 ACRE-FT= 363.06

SUBROUTINE REACH CROSS SECTION 14
LENGTH= .00 INPUT COEFFICIENT=340.0000 INPUT ROUTINGS= .91

AVERAGE WATER VELOCITY= .000 AVERAGE ROUTING COEFF= .0000 NUMBER OF ROUTINGS= .00

SUBROUTINE RUNOFF CROSS SECTION 14
AREA= .71 INPUT RUNOFF CURVE= 80.0 TIME OF CONCENTRATION= .40

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	74.832	(RUNOFF)
16.98	6.207	(RUNOFF)
19.46	4.745	(RUNOFF)
20.45	4.224	(RUNOFF)
21.56	4.202	(RUNOFF)
23.55	3.672	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .2611 CFS-HRS= 119.64 ACRE-FT= 9.89

SUBROUTINE ADDHYD CROSS SECTION 14
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.23	826.170	(NULL)
16.95	174.129	(NULL)
19.47	157.609	(NULL)
21.62	150.720	(NULL)
23.61	144.792	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 7.59

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
10.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
11.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.10	108.20	131.81	201.73	342.80
12.00	DISCHG	543.39	729.53	820.14	801.95	727.46	647.75	576.68	512.16	453.75	405.45

14.00	DISCHG	235.13	230.53	226.15	221.81	218.00	215.15	212.75	210.28	207.67	205.30
15.00	DISCHG	203.50	201.80	199.74	197.35	195.08	193.28	191.54	189.39	186.87	184.49
16.00	DISCHG	182.61	181.02	179.46	177.90	176.54	175.51	174.81	174.39	174.17	174.10
17.00	DISCHG	174.11	173.91	173.30	172.33	171.31	170.47	169.62	168.53	167.23	165.98
18.00	DISCHG	164.98	164.01	162.83	161.45	160.15	159.12	158.39	157.91	157.63	157.48
19.00	DISCHG	157.41	157.41	157.43	157.48	157.54	157.60	157.39	156.71	155.66	154.53
20.00	DISCHG	153.60	152.91	152.45	152.17	152.02	151.93	151.61	150.85	149.72	148.55
21.00	DISCHG	147.59	147.16	147.45	148.30	149.34	150.26	150.71	150.47	149.68	148.71
22.00	DISCHG	147.86	147.22	146.78	146.50	146.34	146.24	145.90	145.11	143.94	142.71
23.00	DISCHG	141.73	141.28	141.55	142.40	143.45	144.36	144.79	144.53	143.71	142.71
24.00	DISCHG	141.74	139.55	135.10	128.82	122.34	116.95	112.89	110.07	108.20	107.01
25.00	DISCHG	106.26	105.78	105.48	105.29	105.18	105.10	105.06	105.03	105.01	105.00
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9213 CFS-HRS= 4512.95 ACRE-FT= 372.95

ENDCMP

```
                                                                                                PASS=  2
EXECUTIVE CONTROL CARD      37A   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********   OPERATION
EXECUTIVE CONTROL CARD       38   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  14/  0
        STARTING TIME=   .00     RAIN DEPTH=  2.58     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
        ALTERNATE NO.= 1         STORM NO.= 1

SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=    .89     INPUT RUNOFF CURVE=  79.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                         332.335                      (RUNOFF)
              19.45                          15.579                      (RUNOFF)
              21.61                          13.420                      (RUNOFF)
              23.62                          11.600                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .8900        CFS-HRS=      511.18        ACRE-FT=      42.24

SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1700.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.24                         431.202                       (NULL)
              19.46                         120.575                       (NULL)
              21.65                         118.390                       (NULL)
              23.66                         116.571                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   6.3559        CFS-HRS=     3650.68        ACRE-FT=     301.69

SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=    .99     INPUT RUNOFF CURVE=  79.0     TIME OF CONCENTRATION=   .56

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                         369.561                      (RUNOFF)
              19.46                          17.332                      (RUNOFF)
              21.63                          14.933                      (RUNOFF)
              23.62                          12.865                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .8906        CFS-HRS=      569.03        ACRE-FT=      47.02

SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.22                         799.329                       (NULL)
              19.46                         137.907                       (NULL)
              21.64                         133.318                       (NULL)
              23.64                         129.428                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   7.4779        CFS-HRS=     4219.71        ACRE-FT=     348.72
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SUBROUTINE REACH      CROSS SECTION   3
          LENGTH=    540.00      INPUT COEFFICIENT=   .8600      INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  10.443        AVERAGE ROUTING COEFF=  .8600        NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF     CROSS SECTION   3
          AREA=    .45      INPUT RUNOFF CURVE=  81.0      TIME OF CONCENTRATION=   .47

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             12.14                         207.658                      (RUNOFF)
             19.46                           8.407                      (RUNOFF)
             21.58                           7.277                      (RUNOFF)
             23.58                           6.275                      (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .9975        CFS-HRS=      289.68        ACRE-FT=      23.94

SUBROUTINE ADDHYD     CROSS SECTION   3
          INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             12.21                         992.025                      (NULL)
             19.46                         146.312                      (NULL)
             21.63                         140.543                      (NULL)
             23.63                         135.652                      (NULL)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.9989        CFS-HRS=     4509.41        ACRE-FT=     372.66

SUBROUTINE REACH      CROSS SECTION   4
          LENGTH=   1000.00      INPUT COEFFICIENT=   .8700      INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  11.377        AVERAGE ROUTING COEFF=  .8700        NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF     CROSS SECTION   4
          AREA=    .06      INPUT RUNOFF CURVE=  75.0      TIME OF CONCENTRATION=   .10

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             11.97                          29.217                      (RUNOFF)
             12.45                           6.830                      (RUNOFF)
             12.95                           3.646                      (RUNOFF)
             13.45                           2.740                      (RUNOFF)
             13.95                           2.168                      (RUNOFF)
             14.45                           1.889                      (RUNOFF)
             14.95                           1.709                      (RUNOFF)
             15.45                           1.518                      (RUNOFF)
             15.95                           1.308                      (RUNOFF)
             16.95                           1.223                      (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6898        CFS-HRS=       26.71        ACRE-FT=       2.21

SUBROUTINE ADDHYD     CROSS SECTION   4
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.23	987.304	(NULL)
19.46	147.228	(NULL)
21.65	141.199	(NULL)
23.65	136.211	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.9409 CFS-HRS= 4536.14 ACRE-FT= 374.87

SUBROUTINE REACH CROSS SECTION 5
LENGTH= 1030.00 INPUT COEFFICIENT= .8700 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 11.377 AVERAGE ROUTING COEFF= .8700 NUMBER OF ROUTINGS= .22

SUBROUTINE RUNOFF CROSS SECTION 5
AREA= .50 INPUT RUNOFF CURVE= 81.0 TIME OF CONCENTRATION= .47

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.14	230.731	(RUNOFF)
19.46	9.341	(RUNOFF)
21.58	8.085	(RUNOFF)
23.58	6.973	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9975 CFS-HRS= 321.87 ACRE-FT= 26.60

SUBROUTINE ADDHYD CROSS SECTION 5
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.23	1191.809	(NULL)
19.46	156.561	(NULL)
21.65	149.196	(NULL)
23.65	143.089	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.6047 CFS-HRS= 4858.11 ACRE-FT= 401.47

SUBROUTINE REACH CROSS SECTION 6
LENGTH= 600.00 INPUT COEFFICIENT= .8800 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 12.467 AVERAGE ROUTING COEFF= .8800 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 6
AREA= .05 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .13

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.98	22.835	(RUNOFF)
12.46	5.607	(RUNOFF)
12.95	3.014	(RUNOFF)
13.45	2.270	(RUNOFF)
13.95	1.800	(RUNOFF)
14.45	1.569	(RUNOFF)
14.95	1.419	(RUNOFF)

```
15.95                          1.088                    (RUNOFF)
16.95                          1.017                    (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6939      CFS-HRS=      22.39      ACRE-FT=      1.85


SUBROUTINE ADDHYD    CROSS SECTION    6
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                PEAK DISCHARGES                PEAK ELEVATIONS
   12.24                      1189.751                      (NULL)
   19.46                       157.323                      (NULL)
   21.65                       149.769                      (NULL)
   23.65                       143.575                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.5722      CFS-HRS=    4880.54      ACRE-FT=    403.33


SUBROUTINE REACH     CROSS SECTION    7
LENGTH=    720.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  12.467      AVERAGE ROUTING COEFF=  .8800      NUMBER OF ROUTINGS=   .14


SUBROUTINE RUNOFF    CROSS SECTION    7
AREA=   1.04     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .58

PEAK TIMES                PEAK DISCHARGES                PEAK ELEVATIONS
   12.21                      427.359                      (RUNOFF)
   19.45                       19.420                      (RUNOFF)
   21.63                       16.627                      (RUNOFF)
   23.63                       14.309                      (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .9979      CFS-HRS=     669.80      ACRE-FT=     55.35


SUBROUTINE ADDHYD    CROSS SECTION    7
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                PEAK DISCHARGES                PEAK ELEVATIONS
   12.24                      1606.096                      (NULL)
   19.46                       176.736                      (NULL)
   21.66                       166.352                      (NULL)
   23.66                       157.839                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.1609      CFS-HRS=    5550.40      ACRE-FT=    458.68


SUBROUTINE REACH     CROSS SECTION    8
LENGTH=    350.00     INPUT COEFFICIENT=   .9000     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  15.300      AVERAGE ROUTING COEFF=  .9000      NUMBER OF ROUTINGS=   .06


SUBROUTINE RUNOFF    CROSS SECTION    8
AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .07
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.97	15.422	(RUNOFF)
12.45	3.462	(RUNOFF)
12.95	1.837	(RUNOFF)
13.45	1.380	(RUNOFF)
13.95	1.089	(RUNOFF)
14.45	.947	(RUNOFF)
14.95	.857	(RUNOFF)
15.45	.761	(RUNOFF)
15.95	.656	(RUNOFF)
16.95	.613	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6903 CFS-HRS= 13.36 ACRE-FT= 1.10

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.24	1604.073	(NULL)
19.46	177.196	(NULL)
21.66	166.683	(NULL)
23.66	158.116	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.1499 CFS-HRS= 5563.78 ACRE-FT= 459.79

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 9
AREA= 2.24 INPUT RUNOFF CURVE= 83.0 TIME OF CONCENTRATION= .41

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.10	1242.440	(RUNOFF)
16.95	59.906	(RUNOFF)
19.43	44.399	(RUNOFF)
21.55	38.607	(RUNOFF)
23.55	33.273	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.1146 CFS-HRS= 1611.28 ACRE-FT= 133.16

SUBROUTINE ADDHYD CROSS SECTION 9
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.17	2714.087	(NULL)
19.45	221.621	(NULL)
21.61	204.949	(NULL)
23.61	191.058	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.7789 CFS-HRS= 7175.13 ACRE-FT= 592.95

```
SUBROUTINE REACH     CROSS SECTION  10
           LENGTH=    810.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
           AREA=    .17     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .33

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.09                         60.586                       (RUNOFF)
              16.96                          3.430                       (RUNOFF)
              19.45                          2.586                       (RUNOFF)
              20.45                          2.288                       (RUNOFF)
              21.51                          2.283                       (RUNOFF)
              22.45                          1.999                       (RUNOFF)
              23.51                          1.983                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6970        CFS-HRS=       76.47        ACRE-FT=       6.32

SUBROUTINE ADDHYD    CROSS SECTION  10
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.18                        2749.709                       (NULL)
              19.45                         224.195                       (NULL)
              21.61                         207.123                       (NULL)
              23.61                         192.931                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.7502        CFS-HRS=     7251.55        ACRE-FT=     599.27

SUBROUTINE REACH     CROSS SECTION  11
           LENGTH=    280.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .04

SUBROUTINE RUNOFF    CROSS SECTION  11
           AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              11.97                         14.608                       (RUNOFF)
              12.45                          3.415                       (RUNOFF)
              12.95                          1.823                       (RUNOFF)
              13.45                          1.370                       (RUNOFF)
              13.95                          1.084                       (RUNOFF)
              14.45                           .945                       (RUNOFF)
              14.95                           .855                       (RUNOFF)
              15.45                           .759                       (RUNOFF)
              15.95                           .654                       (RUNOFF)
              16.95                           .612                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6997        CFS-HRS=       13.35        ACRE-FT=       1.10
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SUBROUTINE ADDHYD CROSS SECTION 11
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.19	2746.968	(NULL)
19.45	224.653	(NULL)
21.62	207.452	(NULL)
23.61	193.207	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 6.45

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.05	105.25	105.70	106.44	107.37
10.00	DISCHG	108.41	109.64	111.24	113.30	115.70	118.37	121.61	126.07	131.72	138.05
11.00	DISCHG	144.79	153.11	165.53	181.95	200.52	224.91	307.23	561.32	1005.27	1577.77
12.00	DISCHG	2194.10	2630.08	2743.90	2542.06	2194.40	1849.57	1558.40	1315.07	1111.93	951.74
13.00	DISCHG	832.79	745.22	675.63	617.95	572.53	538.88	512.20	487.66	464.00	443.48
14.00	DISCHG	427.74	415.00	403.15	391.61	381.46	373.61	366.97	360.32	353.42	347.11
15.00	DISCHG	342.17	337.54	332.16	326.05	320.20	315.45	310.89	305.46	299.25	293.33
16.00	DISCHG	288.52	284.43	280.49	276.59	273.15	270.46	268.55	267.32	266.58	266.19
17.00	DISCHG	266.00	265.36	263.80	261.40	258.87	256.72	254.57	251.92	248.78	245.76
18.00	DISCHG	243.29	240.90	238.08	234.83	231.72	229.22	227.40	226.16	225.39	224.93
19.00	DISCHG	224.68	224.56	224.52	224.53	224.57	224.59	224.06	222.48	220.03	217.41
20.00	DISCHG	215.19	213.52	212.39	211.67	211.23	210.93	210.17	208.43	205.87	203.19
21.00	DISCHG	200.95	199.87	200.36	202.15	204.40	206.45	207.43	206.92	205.14	202.92
22.00	DISCHG	200.93	199.42	198.36	197.68	197.27	196.98	196.19	194.44	191.83	189.08
23.00	DISCHG	186.81	185.73	186.20	187.99	190.25	192.23	193.19	192.66	190.87	188.62
24.00	DISCHG	186.37	181.64	172.01	158.37	144.09	132.00	122.82	116.48	112.28	109.60
25.00	DISCHG	107.89	106.81	106.12	105.69	105.42	105.25	105.14	105.08	105.03	105.01
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.7453 CFS-HRS= 7264.90 ACRE-FT= 600.37

SUBROUTINE REACH CROSS SECTION 12
LENGTH= 440.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 12
AREA= .32 INPUT RUNOFF CURVE= 79.0 TIME OF CONCENTRATION= .34

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.08	149.617	(RUNOFF)

19.45	5.612	(RUNOFF)
20.45	4.955	(RUNOFF)
21.52	4.925	(RUNOFF)
22.45	4.311	(RUNOFF)
23.52	4.266	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .8896 CFS-HRS= 183.72 ACRE-FT= 15.18

SUBROUTINE ADDHYD CROSS SECTION 12
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.18	2865.226	(NULL)
19.45	230.259	(NULL)
21.61	212.275	(NULL)
23.61	197.375	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.7048 CFS-HRS= 7448.61 ACRE-FT= 615.55

SUBROUTINE REACH CROSS SECTION 13
LENGTH= 970.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 13
AREA= .11 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .12

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.98	51.232	(RUNOFF)
12.46	12.369	(RUNOFF)
12.96	6.654	(RUNOFF)
13.45	5.003	(RUNOFF)
13.95	3.963	(RUNOFF)
14.45	3.456	(RUNOFF)
14.95	3.125	(RUNOFF)
15.45	2.774	(RUNOFF)
15.95	2.395	(RUNOFF)
16.95	2.238	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6927 CFS-HRS= 49.17 ACRE-FT= 4.06

SUBROUTINE ADDHYD CROSS SECTION 13
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.20	2858.891	(NULL)
19.45	231.934	(NULL)
21.62	213.514	(NULL)
23.62	198.420	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6886 CFS-HRS= 7497.77 ACRE-FT= 619.62

SUBROUTINE REACH CROSS SECTION 14
LENGTH= .00 INPUT COEFFICIENT=340.0000 INPUT ROUTINGS= .91

AVERAGE WATER VELOCITY= .000 AVERAGE ROUTING COEFF= .0000 NUMBER OF ROUTINGS= .00

SUBROUTINE RUNOFF CROSS SECTION 14
AREA= .71 INPUT RUNOFF CURVE= 80.0 TIME OF CONCENTRATION= .40

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.11	330.999	(RUNOFF)
16.96	17.235	(RUNOFF)
19.45	12.854	(RUNOFF)
21.55	11.217	(RUNOFF)
23.55	9.694	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9429 CFS-HRS= 432.07 ACRE-FT= 35.71

SUBROUTINE ADDHYD CROSS SECTION 14
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.18	3168.233	(NULL)
19.45	244.788	(NULL)
21.61	224.678	(NULL)
23.61	208.059	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 7.59

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.04	105.21	105.61	106.29	107.18
10.00	DISCHG	108.20	109.38	110.91	112.87	115.23	117.95	121.35	126.09	132.32	139.53
11.00	DISCHG	147.35	156.86	170.80	189.37	210.71	238.13	333.89	629.34	1148.00	1819.35
12.00	DISCHG	2534.31	3041.90	3163.13	2919.96	2516.83	2126.19	1792.12	1509.88	1273.49	1086.95
13.00	DISCHG	949.98	848.40	767.61	700.68	648.31	609.76	578.90	550.35	522.90	499.17
14.00	DISCHG	481.05	466.26	452.37	438.93	427.17	418.18	410.45	402.62	394.58	387.32
15.00	DISCHG	381.64	376.20	369.85	362.70	355.95	350.51	345.15	338.73	331.45	324.58
16.00	DISCHG	319.07	314.32	309.71	305.16	301.17	298.09	295.91	294.50	293.66	293.21
17.00	DISCHG	292.99	292.19	290.30	287.50	284.57	282.11	279.58	276.43	272.76	269.26
18.00	DISCHG	266.43	263.62	260.27	256.47	252.88	250.01	247.92	246.50	245.61	245.08
19.00	DISCHG	244.79	244.65	244.61	244.63	244.68	244.71	244.01	242.11	239.24	236.20
20.00	DISCHG	233.66	231.75	230.44	229.61	229.10	228.77	227.81	225.71	222.69	219.58
21.00	DISCHG	217.02	215.86	216.53	218.66	221.28	223.61	224.67	223.97	221.87	219.31
22.00	DISCHG	217.03	215.30	214.08	213.30	212.81	212.49	211.50	209.38	206.30	203.11
23.00	DISCHG	200.51	199.35	200.00	202.12	204.75	207.03	208.05	207.33	205.21	202.61
24.00	DISCHG	200.09	194.21	182.63	166.52	149.92	136.07	125.58	118.26	113.40	110.29
25.00	DISCHG	108.31	107.06	106.28	105.78	105.47	105.28	105.16	105.09	105.04	105.02
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6189 CFS-HRS= 7929.84 ACRE-FT= 655.32

ENDCMP

```
                                                                                                PASS=  3
EXECUTIVE CONTROL CARD      39A   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********   OPERATION
EXECUTIVE CONTROL CARD       40   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  14/  0
        STARTING TIME=   .00     RAIN DEPTH=  4.05     RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
        ALTERNATE NO.= 1         STORM NO.= 3


SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=    .89     INPUT RUNOFF CURVE=  79.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.17                         785.110                      (RUNOFF)
              19.37                          29.677                      (RUNOFF)
              21.61                          25.386                      (RUNOFF)
              23.62                          21.828                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.0004        CFS-HRS=     1148.96        ACRE-FT=      94.95


SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1700.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.21                         877.603                       (NULL)
              19.36                         134.675                       (NULL)
              21.65                         130.329                       (NULL)
              23.66                         126.773                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   7.4663        CFS-HRS=     4288.48        ACRE-FT=     354.40


SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=    .99     INPUT RUNOFF CURVE=  79.0     TIME OF CONCENTRATION=   .56

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.18                         874.316                      (RUNOFF)
              19.45                          33.027                      (RUNOFF)
              21.62                          28.248                      (RUNOFF)
              23.62                          24.208                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.0027        CFS-HRS=     1279.55        ACRE-FT=     105.74


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.19                        1749.124                       (NULL)
              19.37                         167.689                       (NULL)
              21.64                         158.569                       (NULL)
              23.64                         150.965                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.5892        CFS-HRS=     5568.03        ACRE-FT=     460.14
```

```
SUBROUTINE REACH     CROSS SECTION   3
           LENGTH=    540.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION   3
           AREA=    .45     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .47

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.12                        463.993                      (RUNOFF)
              19.45                         15.589                      (RUNOFF)
              21.58                         13.409                      (RUNOFF)
              23.58                         11.510                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.1584        CFS-HRS=      626.82        ACRE-FT=      51.80


SUBROUTINE ADDHYD    CROSS SECTION   3
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.19                       2181.963                       (NULL)
              19.39                        183.262                       (NULL)
              21.63                        171.882                       (NULL)
              23.63                        162.380                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.1197        CFS-HRS=     6194.88        ACRE-FT=     511.95


SUBROUTINE REACH     CROSS SECTION   4
           LENGTH=   1000.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .21


SUBROUTINE RUNOFF    CROSS SECTION   4
           AREA=    .06     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              11.96                         71.040                      (RUNOFF)
              12.45                         15.108                      (RUNOFF)
              12.95                          7.881                      (RUNOFF)
              13.45                          5.842                      (RUNOFF)
              13.95                          4.578                      (RUNOFF)
              14.45                          3.959                      (RUNOFF)
              14.95                          3.558                      (RUNOFF)
              15.45                          3.143                      (RUNOFF)
              15.95                          2.697                      (RUNOFF)
              16.95                          2.502                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6823        CFS-HRS=       65.14        ACRE-FT=       5.38


SUBROUTINE ADDHYD    CROSS SECTION   4
```

```
PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
   12.21                          2174.551                      (NULL)
   19.45                           185.150                      (NULL)
   21.65                           173.202                      (NULL)
   23.65                           163.481                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.0586        CFS-HRS=     6260.09        ACRE-FT=     517.33


SUBROUTINE REACH     CROSS SECTION   5
           LENGTH=   1030.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .22


SUBROUTINE RUNOFF    CROSS SECTION   5
           AREA=    .50     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .47

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.12                           515.548                      (RUNOFF)
              19.45                            17.321                      (RUNOFF)
              21.58                            14.899                      (RUNOFF)
              23.58                            12.788                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.1584        CFS-HRS=      696.47        ACRE-FT=      57.56


SUBROUTINE ADDHYD    CROSS SECTION   5
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                          2636.145                      (NULL)
              19.45                           202.460                      (NULL)
              21.64                           187.939                      (NULL)
              23.65                           176.111                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.7300        CFS-HRS=     6956.87        ACRE-FT=     574.92


SUBROUTINE REACH     CROSS SECTION   6
           LENGTH=    600.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION   6
           AREA=    .05     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .13

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              11.97                            56.379                      (RUNOFF)
              12.45                            12.427                      (RUNOFF)
              12.95                             6.519                      (RUNOFF)
              13.45                             4.841                      (RUNOFF)
              13.95                             3.801                      (RUNOFF)
              14.45                             3.288                      (RUNOFF)
              14.95                             2.955                      (RUNOFF)
```

15.95	2.243	(RUNOFF)
16.95	2.080	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6936 CFS-HRS= 54.65 ACRE-FT= 4.52

SUBROUTINE ADDHYD CROSS SECTION 6
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	2634.432	(NULL)
19.45	204.003	(NULL)
21.65	189.090	(NULL)
23.65	177.082	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.6954 CFS-HRS= 7011.63 ACRE-FT= 579.44

SUBROUTINE REACH CROSS SECTION 7
LENGTH= 720.00 INPUT COEFFICIENT= .8800 INPUT ROUTINGS= .00
AVERAGE WATER VELOCITY= 12.467 AVERAGE ROUTING COEFF= .8800 NUMBER OF ROUTINGS= .14

SUBROUTINE RUNOFF CROSS SECTION 7
AREA= 1.04 INPUT RUNOFF CURVE= 81.0 TIME OF CONCENTRATION= .58

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.19	959.673	(RUNOFF)
21.63	30.642	(RUNOFF)
23.63	26.247	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.1595 CFS-HRS= 1449.43 ACRE-FT= 119.78

SUBROUTINE ADDHYD CROSS SECTION 7
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	3571.900	(NULL)
21.65	219.650	(NULL)
23.65	203.246	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.2941 CFS-HRS= 8461.22 ACRE-FT= 699.23

SUBROUTINE REACH CROSS SECTION 8
LENGTH= 350.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00
AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 8
AREA= .03 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .07

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS

12.45	7.643	(RUNOFF)
12.95	3.967	(RUNOFF)
13.45	2.941	(RUNOFF)
13.95	2.298	(RUNOFF)
14.45	1.985	(RUNOFF)
14.95	1.785	(RUNOFF)
15.45	1.576	(RUNOFF)
15.95	1.351	(RUNOFF)
16.95	1.254	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6789 CFS-HRS= 32.51 ACRE-FT= 2.69

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.22	3568.238	(NULL)
21.66	220.315	(NULL)
23.66	203.800	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.2821 CFS-HRS= 8493.77 ACRE-FT= 701.93

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

SUBROUTINE RUNOFF CROSS SECTION 9
AREA= 2.24 INPUT RUNOFF CURVE= 83.0 TIME OF CONCENTRATION= .41

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.09	2629.256	(RUNOFF)
19.39	80.238	(RUNOFF)
21.55	69.391	(RUNOFF)
23.55	59.563	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.3253 CFS-HRS= 3361.50 ACRE-FT= 277.79

SUBROUTINE ADDHYD CROSS SECTION 9
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.15	5942.866	(NULL)
19.37	321.119	(NULL)
21.61	289.097	(NULL)
23.61	262.769	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.9392 CFS-HRS= 11855.49 ACRE-FT= 979.74

SUBROUTINE REACH CROSS SECTION 10
LENGTH= 810.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

```
AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
AREA=    .17     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .33

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
   12.07                         157.086                     (RUNOFF)
   16.95                           7.025                     (RUNOFF)
   19.45                           5.221                     (RUNOFF)
   21.51                           4.570                     (RUNOFF)
   23.51                           3.943                     (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.7022        CFS-HRS=      186.76        ACRE-FT=      15.43

SUBROUTINE ADDHYD    CROSS SECTION  10
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
   12.16                        6042.931                      (NULL)
   19.36                         326.331                      (NULL)
   21.61                         293.463                      (NULL)
   23.61                         266.507                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.9065        CFS-HRS=    12042.23        ACRE-FT=     995.17

SUBROUTINE REACH     CROSS SECTION  11
LENGTH=    280.00     INPUT COEFFICIENT=  .9100     INPUT ROUTINGS=   .00

AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .04

SUBROUTINE RUNOFF    CROSS SECTION  11
AREA=    .03     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
   11.96                          35.520                     (RUNOFF)
   12.45                           7.554                     (RUNOFF)
   12.95                           3.940                     (RUNOFF)
   13.45                           2.921                     (RUNOFF)
   13.95                           2.289                     (RUNOFF)
   14.45                           1.979                     (RUNOFF)
   14.95                           1.779                     (RUNOFF)
   15.45                           1.571                     (RUNOFF)
   15.95                           1.348                     (RUNOFF)
   16.95                           1.251                     (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6823        CFS-HRS=       32.57        ACRE-FT=       2.69

SUBROUTINE ADDHYD    CROSS SECTION  11
INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
```

19.36	327.252	(NULL)
21.61	294.127	(NULL)
23.61	267.061	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 6.45

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.01	105.08	105.36	105.90	106.65	107.56	108.53	109.54
8.00	DISCHG	110.62	111.89	113.56	115.63	117.93	120.33	122.86	125.65	128.75	132.06
9.00	DISCHG	135.50	139.30	143.80	148.94	154.31	159.59	165.02	171.17	178.08	185.21
10.00	DISCHG	192.19	200.00	210.14	222.57	235.68	248.27	262.29	280.68	303.19	326.80
11.00	DISCHG	349.51	376.59	415.93	466.45	520.26	587.06	828.35	1489.60	2559.92	3834.09
12.00	DISCHG	5079.37	5900.16	5999.86	5453.69	4628.99	3830.50	3163.66	2617.68	2172.42	1826.43
13.00	DISCHG	1570.96	1383.51	1236.35	1116.18	1022.17	952.39	897.09	847.02	799.53	758.58
14.00	DISCHG	727.07	701.45	677.76	654.90	634.79	619.13	605.77	592.49	578.87	566.41
15.00	DISCHG	556.54	547.26	536.65	524.71	513.32	504.00	494.99	484.41	472.44	461.05
16.00	DISCHG	451.71	443.72	436.07	428.52	421.85	416.59	412.81	410.30	408.73	407.82
17.00	DISCHG	407.29	405.92	402.83	398.22	393.36	389.20	385.02	379.92	373.95	368.20
18.00	DISCHG	363.47	358.87	353.50	347.35	341.47	336.72	333.22	330.81	329.28	328.34
19.00	DISCHG	327.78	327.47	327.31	327.25	327.25	327.21	326.12	323.14	318.55	313.64
20.00	DISCHG	309.47	306.30	304.13	302.72	301.84	301.22	299.73	296.45	291.69	286.72
21.00	DISCHG	282.53	280.48	281.32	284.55	288.62	292.34	294.10	293.12	289.82	285.72
22.00	DISCHG	282.01	279.17	277.17	275.87	275.05	274.48	272.97	269.71	264.89	259.82
23.00	DISCHG	255.62	253.60	254.40	257.62	261.72	265.31	267.04	266.05	262.77	258.64
24.00	DISCHG	254.48	245.69	228.03	203.12	177.01	154.84	137.95	126.24	118.49	113.52
25.00	DISCHG	110.36	108.36	107.09	106.28	105.78	105.46	105.26	105.14	105.06	105.02
26.00	DISCHG	105.01	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.9008 CFS-HRS= 12074.79 ACRE-FT= 997.86

SUBROUTINE REACH CROSS SECTION 12
LENGTH= 440.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 12
AREA= .32 INPUT RUNOFF CURVE= 79.0 TIME OF CONCENTRATION= .34

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.06	344.800	(RUNOFF)
16.95	14.456	(RUNOFF)
19.45	10.686	(RUNOFF)
21.51	9.315	(RUNOFF)
23.52	8.025	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0000 CFS-HRS= 413.04 ACRE-FT= 34.13

```
SUBROUTINE ADDHYD    CROSS SECTION  12
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.16                        6317.976                      (NULL)
              19.36                         337.924                      (NULL)
              21.61                         303.254                      (NULL)
              23.61                         274.907                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.8582        CFS-HRS=    12487.85        ACRE-FT=    1032.00

SUBROUTINE REACH     CROSS SECTION  13
           LENGTH=    970.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .14

SUBROUTINE RUNOFF    CROSS SECTION  13
           AREA=    .11     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .12

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              11.97                        125.874                     (RUNOFF)
              12.45                         27.398                     (RUNOFF)
              12.95                         14.389                     (RUNOFF)
              13.45                         10.671                     (RUNOFF)
              13.95                          8.371                     (RUNOFF)
              14.45                          7.243                     (RUNOFF)
              14.95                          6.506                     (RUNOFF)
              15.45                          5.744                     (RUNOFF)
              15.95                          4.937                     (RUNOFF)
              16.95                          4.579                     (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6903        CFS-HRS=      120.00        ACRE-FT=       9.92

SUBROUTINE ADDHYD    CROSS SECTION  13
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.17                       6311.389                      (NULL)
              21.62                        305.752                      (NULL)
              23.62                        277.004                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.8395        CFS-HRS=    12607.87        ACRE-FT=    1041.91

SUBROUTINE REACH     CROSS SECTION  14
           LENGTH=       .00     INPUT COEFFICIENT=340.0000     INPUT ROUTINGS=   .91

           AVERAGE WATER VELOCITY=    .000       AVERAGE ROUTING COEFF=  .0000       NUMBER OF ROUTINGS=   .00

SUBROUTINE RUNOFF    CROSS SECTION  14
           AREA=    .71     INPUT RUNOFF CURVE=  80.0     TIME OF CONCENTRATION=   .40
```

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.09	752.894	(RUNOFF)
16.95	32.735	(RUNOFF)
19.41	24.131	(RUNOFF)
21.55	20.936	(RUNOFF)
23.55	18.004	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0794 CFS-HRS= 952.80 ACRE-FT= 78.74

SUBROUTINE ADDHYD CROSS SECTION 14
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	7018.701	(NULL)
19.37	365.430	(NULL)
21.61	326.594	(NULL)
23.61	294.910	(NULL)

TIME HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 7.59

.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.01	105.07	105.30	105.79	106.50	107.37	108.33	109.33
8.00	DISCHG	110.39	111.63	113.22	115.24	117.63	120.23	123.07	126.25	129.82	133.68
9.00	DISCHG	137.71	142.10	147.24	153.12	159.30	165.42	171.69	178.81	186.79	195.05
10.00	DISCHG	203.17	212.25	223.96	238.27	253.42	268.01	284.35	305.69	331.77	359.16
11.00	DISCHG	385.45	417.28	463.19	521.92	584.35	659.66	955.75	1744.25	3006.93	4502.68
12.00	DISCHG	5965.10	6882.64	6961.17	6298.63	5336.47	4428.60	3662.11	3027.66	2508.44	2104.90
13.00	DISCHG	1810.41	1592.86	1421.81	1282.16	1173.66	1093.72	1029.68	971.24	915.93	868.45
14.00	DISCHG	832.12	802.28	774.42	747.69	724.34	706.38	690.77	675.10	659.15	644.76
15.00	DISCHG	633.40	622.46	609.85	595.84	582.64	571.94	561.32	548.76	534.65	521.38
16.00	DISCHG	510.68	501.38	492.38	483.55	475.80	469.78	465.45	462.57	460.76	459.72
17.00	DISCHG	459.11	457.37	453.63	448.19	442.55	437.79	432.83	426.75	419.74	413.05
18.00	DISCHG	407.63	402.20	395.80	388.58	381.77	376.29	372.28	369.52	367.75	366.66
19.00	DISCHG	366.02	365.66	365.48	365.42	365.43	365.39	363.97	360.33	354.92	349.21
20.00	DISCHG	344.42	340.79	338.29	336.66	335.64	334.95	333.06	329.09	323.45	317.64
21.00	DISCHG	312.84	310.67	311.87	315.72	320.48	324.71	326.58	325.23	321.30	316.56
22.00	DISCHG	312.30	309.05	306.74	305.23	304.28	303.63	301.73	297.75	292.05	286.14
23.00	DISCHG	281.32	279.17	280.34	284.18	288.95	293.10	294.90	293.53	289.61	284.82
24.00	DISCHG	280.15	269.16	247.76	218.19	187.77	162.35	143.03	129.53	120.56	114.80
25.00	DISCHG	111.14	108.83	107.37	106.45	105.88	105.53	105.31	105.17	105.08	105.03
26.00	DISCHG	105.01	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.7684 CFS-HRS= 13560.66 ACRE-FT= 1120.65

ENDCMP

SUMMARY TABLE 1

ALT	STORM	ID	DA SQ-MI.	RAIN TBLE	AMC	DELTA-T HRS.	TZERO HRS.	PRECIP IN.	PRECIP DURATION	PEAK-Q CFS	PEAK-TIME	PEAK-ELEV	RUNOFF IN.	CSM
1	1	1A	.89	2	2	.10	.00	1.45	24.00	66.96	12.27	.00	.24	75.24
1	1	2	.89	2	2	.10	.00	1.45	24.00	171.01	12.32	.00	5.70	192.14
1	1	2B	.99	2	2	.10	.00	1.45	24.00	73.66	12.27	.00	.24	74.41
1	1	2	1.88	2	2	.10	.00	1.45	24.00	244.23	12.29	.00	2.82	129.91
1	1	3C	.45	2	2	.10	.00	1.45	24.00	50.02	12.20	.00	.29	111.16
1	1	3	2.33	2	2	.10	.00	1.45	24.00	288.91	12.28	.00	2.33	124.00
1	1	4D	.06	2	2	.10	.00	1.45	24.00	4.80	12.00	.00	.15	80.03
1	1	4	2.39	2	2	.10	.00	1.45	24.00	288.53	12.30	.00	2.28	120.72
1	1	5E	.50	2	2	.10	.00	1.45	24.00	55.58	12.20	.00	.29	111.16
1	1	5	2.89	2	2	.10	.00	1.45	24.00	335.95	12.30	.00	1.93	116.25
1	1	6F	.05	2	2	.10	.00	1.45	24.00	3.55	12.02	.00	.15	70.97
1	1	6	2.94	2	2	.10	.00	1.45	24.00	335.75	12.31	.00	1.90	114.20
1	1	7G	1.04	2	2	.10	.00	1.45	24.00	100.87	12.27	.00	.29	96.99
1	1	7	3.98	2	2	.10	.00	1.45	24.00	434.01	12.31	.00	1.48	109.05
1	1	8H	.03	2	2	.10	.00	1.45	24.00	2.70	11.99	.00	.15	90.03
1	1	8	4.01	2	2	.10	.00	1.45	24.00	433.68	12.31	.00	1.47	108.15
1	1	9A	2.24	2	2	.10	.00	1.45	24.00	347.54	12.14	.00	.35	155.15
1	1	9	6.25	2	2	.10	.00	1.45	24.00	734.06	12.22	.00	1.07	117.45
1	1	10B	.17	2	2	.10	.00	1.45	24.00	7.93	12.15	.00	.15	46.67
1	1	10	6.42	2	2	.10	.00	1.45	24.00	736.66	12.23	.00	1.05	114.75
1	1	11C	.03	2	2	.10	.00	1.45	24.00	2.40	12.00	.00	.15	80.03
1	1	11	6.45	2	2	.10	.00	1.45	24.00	735.45	12.23	.00	1.04	114.02
1	1	12A	.32	2	2	.10	.00	1.45	24.00	31.85	12.13	.00	.24	99.52
1	1	12	6.77	2	2	.10	.00	1.45	24.00	759.67	12.23	.00	1.00	112.21
1	1	13B	.11	2	2	.10	.00	1.45	24.00	8.10	12.01	.00	.15	73.61
1	1	13	6.88	2	2	.10	.00	1.45	24.00	756.04	12.25	.00	.99	109.89
1	1	14C	.71	2	2	.10	.00	1.45	24.00	74.83	12.16	.00	.26	105.40
1	1	14	7.59	2	2	.10	.00	1.45	24.00	826.17	12.23	.00	.92	108.85
1	1	1A	.89	2	2	.10	.00	2.58	24.00	332.34	12.20	.00	.89	373.41
1	1	2	.89	2	2	.10	.00	2.58	24.00	431.20	12.24	.00	6.36	484.50
1	1	2B	.99	2	2	.10	.00	2.58	24.00	369.56	12.20	.00	.89	373.29
1	1	2	1.88	2	2	.10	.00	2.58	24.00	799.33	12.22	.00	3.48	425.17
1	1	3C	.45	2	2	.10	.00	2.58	24.00	207.66	12.14	.00	1.00	461.46
1	1	3	2.33	2	2	.10	.00	2.58	24.00	992.03	12.21	.00	3.00	425.76
1	1	4D	.06	2	2	.10	.00	2.58	24.00	29.22	11.97	.00	.69	486.94
1	1	4	2.39	2	2	.10	.00	2.58	24.00	987.30	12.23	.00	2.94	413.10
1	1	5E	.50	2	2	.10	.00	2.58	24.00	230.73	12.14	.00	1.00	461.46
1	1	5	2.89	2	2	.10	.00	2.58	24.00	1191.81	12.23	.00	2.60	412.39
1	1	6F	.05	2	2	.10	.00	2.58	24.00	22.84	11.98	.00	.69	456.71
1	1	6	2.94	2	2	.10	.00	2.58	24.00	1189.75	12.24	.00	2.57	404.68
1	1	7G	1.04	2	2	.10	.00	2.58	24.00	427.36	12.21	.00	1.00	410.92
1	1	7	3.98	2	2	.10	.00	2.58	24.00	1606.10	12.24	.00	2.16	403.54
1	1	8H	.03	2	2	.10	.00	2.58	24.00	15.42	11.97	.00	.69	514.07
1	1	8	4.01	2	2	.10	.00	2.58	24.00	1604.07	12.24	.00	2.15	400.02
1	1	9A	2.24	2	2	.10	.00	2.58	24.00	1242.44	12.10	.00	1.11	554.66
1	1	9	6.25	2	2	.10	.00	2.58	24.00	2714.09	12.17	.00	1.78	434.25
1	1	10B	.17	2	2	.10	.00	2.58	24.00	60.59	12.09	.00	.70	356.39
1	1	10	6.42	2	2	.10	.00	2.58	24.00	2749.71	12.18	.00	1.75	428.30
1	1	11C	.03	2	2	.10	.00	2.58	24.00	14.61	11.97	.00	.69	486.94
1	1	11	6.45	2	2	.10	.00	2.58	24.00	2746.97	12.19	.00	1.75	425.89
1	1	12A	.32	2	2	.10	.00	2.58	24.00	149.02	12.08	.00	.89	465.68
1	1	12	6.77	2	2	.10	.00	2.58	24.00	2865.23	12.18	.00	1.70	423.22

1	1	13	6.88	2	2	.10	.00	2.58	24.00	2858.89	12.20	.00	1.69	415.54
1	1	~~14~~ 6C	.71	2	2	.10	.00	2.58	24.00	331.00	12.11	.00	.94	466.20
1	1	14	7.59	2	2	.10	.00	2.58	24.00	3168.23	12.18	.00	1.62	417.42
1	3	~~1~~ 4A	.89	2	2	.10	.00	4.05	24.00	785.11	12.17	.00	2.00	882.15
1	3	2	.89	2	2	.10	.00	4.05	24.00	877.60	12.21	.00	7.47	986.07
1	3	~~2~~ 4B	.99	2	2	.10	.00	4.05	24.00	874.32	12.18	.00	2.00	883.15
1	3	2	1.88	2	2	.10	.00	4.05	24.00	1749.12	12.19	.00	4.59	930.39
1	3	~~3~~ 4C	.45	2	2	.10	.00	4.05	24.00	463.99	12.12	.00	2.16	1031.10
1	3	3	2.33	2	2	.10	.00	4.05	24.00	2181.96	12.19	.00	4.12	936.46
1	3	~~4~~ 4D	.06	2	2	.10	.00	4.05	24.00	71.04	11.96	.00	1.68	1184.00
1	3	4	2.39	2	2	.10	.00	4.05	24.00	2174.55	12.21	.00	4.06	909.85
1	3	~~5~~ 4E	.50	2	2	.10	.00	4.05	24.00	515.55	12.12	.00	2.16	1031.10
1	3	5	2.89	2	2	.10	.00	4.05	24.00	2636.14	12.20	.00	3.73	912.16
1	3	~~6~~ 4F	.05	2	2	.10	.00	4.05	24.00	56.38	11.97	.00	1.69	1127.58
1	3	6	2.94	2	2	.10	.00	4.05	24.00	2634.43	12.21	.00	3.70	896.07
1	3	~~7~~ 4G	1.04	2	2	.10	.00	4.05	24.00	959.67	12.19	.00	2.16	922.76
1	3	7	3.98	2	2	.10	.00	4.05	24.00	3571.90	12.21	.00	3.29	897.46
1	3	~~8~~ 4H	.03	2	2	.10	.00	4.05	24.00	36.94	11.96	.00	1.68	1231.34
1	3	8	4.01	2	2	.10	.00	4.05	24.00	3568.24	12.22	.00	3.28	889.83
1	3	~~9~~ 5A	2.24	2	2	.10	.00	4.05	24.00	2629.26	12.09	.00	2.33	1173.77
1	3	9	6.25	2	2	.10	.00	4.05	24.00	5942.87	12.15	.00	2.94	950.86
1	3	~~10~~ 5B	.17	2	2	.10	.00	4.05	24.00	157.09	12.07	.00	1.70	924.04
1	3	10	6.42	2	2	.10	.00	4.05	24.00	6042.93	12.16	.00	2.91	941.27
1	3	~~11~~ 5C	.03	2	2	.10	.00	4.05	24.00	35.52	11.96	.00	1.68	1184.00
1	3	11	6.45	2	2	.10	.00	4.05	24.00	6038.44	12.17	.00	2.90	936.19
1	3	~~12~~ 6A	.32	2	2	.10	.00	4.05	24.00	344.80	12.06	.00	2.00	1077.50
1	3	12	6.77	2	2	.10	.00	4.05	24.00	6317.98	12.16	.00	2.86	933.23
1	3	~~13~~ 6B	.11	2	2	.10	.00	4.05	24.00	125.87	11.97	.00	1.69	1144.31
1	3	13	6.88	2	2	.10	.00	4.05	24.00	6311.39	12.17	.00	2.84	917.35
1	3	~~14~~ 6C	.71	2	2	.10	.00	4.05	24.00	752.89	12.09	.00	2.08	1060.41
1	3	14	7.59	2	2	.10	.00	4.05	24.00	7018.70	12.16	.00	2.77	924.73

SUMMARY TABLE 3

	DISCHARGE,CFS									
	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10
XSEC/STRUC NO. 1 ALTERNATE 1	332.34	785.11	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 2 ALTERNATE 1	799.33	1749.12	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 3 ALTERNATE 1	992.03	2181.96	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 4 ALTERNATE 1	987.30	2174.55	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 5 ALTERNATE 1	1191.81	2636.14	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 6 ALTERNATE 1	1189.75	2634.43	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 7 ALTERNATE 1	1606.10	3571.90	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 8 ALTERNATE 1	1604.07	3568.24	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 9 ALTERNATE 1	2714.09	5942.87	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 10 ALTERNATE 1	2749.71	6042.93	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 11 ALTERNATE 1	2746.97	6038.44	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 12 ALTERNATE 1	2865.23	6317.98	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 13 ALTERNATE 1	2858.89	6311.39	.00	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 14 ALTERNATE 1	3168.23	7018.70	.00	.00	.00	.00	.00	.00	.00	.00

ENDJOB CARD ENCOUNTERED. END OF JOB.

This Data is
D.O. Ex for
Standard Control
Dated 4/12/85
Hem

SCS-ENG-273
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U. S. DEPARTMENT [illegible] ICULTURE
SOIL CONSE. [illegible] ON SERVICE

STANDARD CONTROL FOR WATERSHED

(DES/TR 20, BDWH)

Page 1 of ___

Watershed Bulldg Wash Hydrologist Hem Date 12/23/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUT-PUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
4	RUNOFF	1					6										
								SURF. ELEV. AT T=0, FT.									
6	RESVOR	2			4		7										
								LENGTH, FT.	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3			7		5										
								AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	001				6	0.04	75.	0.08	1			1		1	1
4	ADDHYD	4			5	6	7										
6	SAVMOV	5															
6	SAVMOV	5															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															
	ENDATA							NOTE: This card is to be used only at end of all standard control cards.									

Control Word	
6 RUNOFF 1	Calls the subroutine to develop runoff hydrograph using the data from DATA FIELDS #1, 2, and 3.
6 RESVOR 2	Calls the subroutine to perform storage indication routing of a hydrograph. DATA FIELD #1 is the starting elevation for routing to begin. If DATA FIELD #1 is left blank, outflow equals inflow when routing begins. If DATA FIELD #1 is an elevation, routing will begin at that elevation regardless of the relationship between inflow discharge and the discharge at the given elevation.
6 REACH 3	Calls the subroutine to perform convex routing using the reach length (DATA FIELD #1) and, optionally, the routing coefficient (DATA FIELD #2). The range of the coefficient must be between .10 and .98 . If the routing coefficient is not given an XSECTN table for the specific cross section is required.
6 ADDHYD 4	Calls the subroutine to add two hydrographs together.
6 SAVMOV 5	Calls the subroutine to move a hydrograph from one storage area to another storage area.
6 DIVERT 6	Calls the subroutine to divide an inflow hydrograph into two separate outflow hydrographs. Two procedures are available with this card.
Procedure #1	Output #1 will contain that portion of the inflow hydrograph below and equal to the discharge given in DATA FIELD #2. The second hydrograph will contain that portion of the inflow hydrograph above the given discharge in DATA FIELD #1.
Col 35-36	Maximum discharge in CFS for OUTPUT #1 hydrograph.
Col 37-48	Drainage area split in decimal percent to retain with OUTPUT #1 hydrograph. If left blank, all drainage area goes with OUTPUT #2 hydrograph.
Procedure #2	The inflow hydrograph may be divided proportionally to two elevation vs. discharge rating tables. These tables must be provided by the user as cross sections, using only the elevation and discharge columns.
Col 13-15	ID of first rating table associated with OUTPUT #1 hydrograph.
Col 25-36	Blank or zero.
Col 37-48	Drainage area split in decimal percent to retain with OUTPUT #1 hydrograph. If left blank, all drainage area goes with OUTPUT #2 hydrograph.
Col 49-60	ID of second rating table associated with OUTPUT #2 hydrograph. (Note - ID must be provided in decimal form. ie. 102) If blank or zero the next sequential ID after the first rating table ID is assumed for the second rating table ID. ie. 101 & 102)
DATA FIELD #1, DATA FIELD #2, DATA FIELD #3 contain data required by the called subroutines. Decimals are required.	
Output Options	If a particular option is wanted, put a "1" in the appropriate blocks.
Col 51	Will compute Peak Q, Peak T, and Peak Elev (if rating is available) using three-point interpolation. Will sort up to the ten maximum peaks.
Col 53	Will print the discharge values of the hydrograph in tabular form.
Col 65	Will print the elevation values of the hydrograph in tabular form.
Col 67	Will compute the volume under the hydrograph in INCHES, CFS-HRS, and AC-FT.
Col 69	Will punch the hydrograph coordinates in READHD format.
Col 71	Requests the results of the subroutine be inserted into the summary tables at the end of the job. Required for punching percent-chance discharge cards for use in the Project Formulation (Economics) Program.
Col 73-80	CARD Identification. Any alphanumeric characters including blanks. The program does not use this data.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Building Wash Hydrologist Hom Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.										Put "1" in space						
C	RUNOFF	1					5	AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
C	RESVOR	2			6		7	SURF. ELEV. AT T=0, FT.									
C	REACH	3	002		6		5	LENGTH FT 1839.	(OPTIONAL) ROUTING COEFFICIENT (C) 0.86								2
C	RUNOFF	1	002				6	AREA, SQ MI 0.14	RUNOFF CURVE NO. 75.	TIME OF CONCENTRATION, HRS. 0.17	1		1	1	1		3
C	ADDHYD	4	602		5	6	7				1		1	1	1		4
C	SAVMOV	5															
C	SAVMOV	5															
C	ADDHYD	4			5	6	7										
C	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
C	DIVERT	6															
END DATA								NOTE: This card is to be used only at end of all standard control cards.									

Control Word

6 RUNOFF 1 — Calls the subroutine to develop runoff hydrograph using the data from DATA FIELDS #1, 2, and 3.

6 RESVOR 2 — Calls the subroutine to perform storage indication routing of a hydrograph. DATA FIELD #1 is the starting elevation for routing to begin. If DATA FIELD #1 is left blank, outflow equals inflow when routing begins. If DATA FIELD #1 is an elevation, routing will begin at that elevation regardless of the relationship between inflow discharge and the discharge at the given elevation.

6 REACH 3 — Calls the subroutine to perform convex routing using the reach length (DATA FIELD #1) and, optionally, the routing coefficient (DATA FIELD #2). The range of the coefficient must be between .10 and .98 . If the routing coefficient is not given , an XSECTN table for the specific cross section is required.

6 ADDHYD 4 — Calls the subroutine to add two hydrographs together.

6 SAVMOV 5 — Calls the subroutine to move a hydrograph from one storage area to another storage area.

6 DIVERT 6 — Calls the subroutine to divide an inflow hydrograph into two separate outflow hydrographs. Two procedures are available with this card:

Procedure #1 — Output #1 will contain that portion of the inflow hydrograph below and equal to the discharge given in DATA FIELD #1. The second hydrograph will contain that portion of the inflow hydrograph above the given discharge in DATA FIELD #1.

Col 25-36 — Maximum discharge in CFS for OUTPUT #1 hydrograph.
Col 37-48 — Drainage area split in decimal percent to retain with OUTPUT #1 hydrograph. If left blank, all drainage area goes with OUTPUT #2 hydrograph.

Procedure #2 — The inflow hydrograph may be divided proportionally to two elevation vs. discharge rating tables. These tables must be provided by the user as cross sections, using only the elevation and discharge columns.

Col 13-15 — ID of first rating table associated with OUTPUT #1 hydrograph.
Col 25-36 — Blank or zero.
Col 37-48 — Drainage area split in decimal percent to retain with OUTPUT #1 hydrograph. If left blank, all drainage area goes with OUTPUT #2 hydrograph.
Col 49-60 — ID of second rating table associated with OUTPUT #2 hydrograph. (Note - ID must be provided in decimal form. ie, 102. If blank or zero the next sequential ID after the first rating table ID is assumed for the second rating table ID. ie, 101 & 102)

DATA FIELD #1, DATA FIELD #2, DATA FIELD #3 contain data required by the called subroutines. Decimals are required.

Output Options — If a particular option is wanted, put a "1" in the appropriate blocks.

Col 61 — Will compute Peak Q, Peak T, and Peak Elev (if rating table is available) using three-point interpolation. Will supply up to the ten maximum peaks.

Col 63 — Will print the discharge values of the hydrograph in tabular form.

Col 65 — Will print the elevation values of the hydrograph in tabular form.

Col 67 — Will compute the volume under the hydrograph in INCHES, CFS-HRS, and AC-FT.

Col 69 — Will punch the hydrograph coordinates in READHD format.

Col 71 — Requests the results of the subroutine be inserted in the summary tables at the end of the job. Required for punching percent-chance discharge cards for use in the Project Formulation (Economics) Program.

Col 73-80 — CARD identification. Any alphanumeric characters including blanks. The program does not use this data.

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Rev. 5-73

U. S. DEPARTMENT O. AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Page 3 of ___

Watershed Building Wash Hydrologist Hem Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUT-PUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNC	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
6	RUNOFF	1				6							1				
								SURF. ELEV. AT T=0, FT.									
6	RESVOR	2				6	7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3	003		7		5	540.	0.86								5
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	003				6	0.94	78.	0.54	1		1	1		1	6
6	ADDHYD	4	003		5	6	7				1		1	1		1	7
6	SAVMOV	5															
6	SAVMOV	5															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															
	ENDATA							NOTE: This card is to be used only at end of all standard control cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Bulldog Wash Hydrologist Hess Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
6	RUNOFF	1					6										
								SURF. ELEV. AT T=0, FT.									
6	RCSVCR	2					7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3	004		7		5	1000.	0.87								8
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	004				6	0.06	75.	0.10	1			1		1	9
6	ADDHYD	4	004		5	6	7				1			1		1	10
6	SAVMOV	5															
6	SAVMOV	5															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															
	ENDATA							NOTE: This card is to be used only at end of all standard control cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Building Wash Hydrologist Hm Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUT-PUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
6	RUNOFF					6											
								SURF. ELEV. AT T=0, FT.									
6	RESVOR					7											
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3	005		7		5	1030.	0.87								11
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	005				6	0.35	77.	0.39	1		1		1		12
6	ADDHYD	4	005		5	6	7				1		1		1		13
6	SAVMOV	5															
6	SAVMOV	5															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT 1	OUT-PUT 2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															
6	ENDATA							NOTE: This card is to be used only at end of standard control cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Building Wash Hydrologist Hess Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
C	RUNOFF	1				6											
								SURF. ELEV. AT T=0, FT.									
C	RESVOR	2			6		7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
C	REACH	3	006		7		5	283.	0.88								14
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
C	RUNOFF	1	006				6	0.04	75.	0.13	1		1		1		15
C	ADDHYD	4	006		5	6	7				1		1		1		16
C	SAVMOV	5															
C	ADDHYD	4			5	6	7										
C	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
C	DIVERT	6															
	END AT A							NOTE: This card is to be used only at end of all standard control cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Bullfrog Wash Hydrologist Hem Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
C	RUNOFF	1					6										
								SURF. ELEV. AT T=0, FT.									
C	RESVOR	2			6		7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
C	REACH	3	007		7		5	1050.	0.88								17
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
C	RUNOFF	1	007				6	0.88	81.	0.59	1		1		1		18
C	ADDHYD	4	007		5	6	7				1		1		1		19
C	SAVMOV	5															
C	SAVMOV	5															
C	ADDHYD	4			5	6	7										
C	SAVMOV	5															
					IN-PUT	OUT-PUT 1	OUT-PUT 2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
C	DIVERT	6															
	END DATA							NOTE: This card is to be used only at end of all standard format cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed: Bulldog West Hydrologist: Hem Date: 12/20/83

IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields. Put "1" in space

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
								AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
C	RUNOFF	1					6										
								SURF. ELEV. AT T=0, FT.									
C	RESVOR	2			6		7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
C	REACH	3	008		7		5	350.	0.90								20
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
C	RUNOFF	1	008				6	0.03	75.	0.08	1			1		1	21
C	ADDHYD	4	008		5	6	7				1			1		1	22
C	SAVMOV	5															
C	SAVMOV	5															
C	ADDHYD	4			5	6	7										
C	SAVMOV	5															
					IN-PUT	OUT-PUT 1	OUT-PUT 2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
C	DIVERT	6															
	END OF DATA																

NOTE: This card is to be used only at end of all standard control cards.

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Building West Hydrologist Hom Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	SUBROUTINE (OPERATION) NO.	X SECTION/ STRUCTURE XSECT NO.	X SECTION/ STRUCTURE STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	HYDROGRAPH NUMBER INPUT #2	HYDROGRAPH NUMBER OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	PRINT HYD	PRINT ELEV	PRINT VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
6	RUNOFF	1					6										
								SURF. ELEV. AT T=0, FT.									
6	RESVOR	2			6		7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3	009		7		5	750.	0.90								23
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	009				6	1.77	83.	0.43	1			1		1	24
6	ADDHYD	4	009		5	6	7				1			1		1	25
6	SAVHOV	5															
6	SAVMOV	5															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT 1	OUT-PUT 2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															
	ENDAT*							NOTE: This card is to be used only at end of all standard control cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

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Watershed Bulldog Wash Hydrologist Hem Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	SUBROUTINE (OPERATION) NO.	X SECTION/ STRUCTURE XSECT NO.	X SECTION/ STRUCTURE STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	HYDROGRAPH NUMBER INPUT #2	HYDROGRAPH NUMBER OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	PRINT HYD	PRINT ELEV	PRINT VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
6	RUNOFF	1				6											
								SURF. ELEV. AT T=0, FT.									
6	RESVOR	2			6		7										
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3	010		7		5	810.	0.91								26
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	010				6	0.19	75.	0.31	1			1		1	27
6	ADDHYD	4	010		5	6	7				1			1		1	28
6	SAVMOV	5															
6	SAVMOV	5															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															
END ATA								NOTE: This card is to be used only at end of all standard control cards.									

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U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

STANDARD CONTROL FOR WATERSHED

Watershed Bulldog West Hydrologist Hem Date 12/20/83

DATA CODE	SUBROUTINE (OPERATION) NAME	NO.	X SECTION/ STRUCTURE XSECT NO.	STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	INPUT #2	OUTPUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	HYD	ELEV	VOL	PUNCH	SUM	CARD NO./ IDENTIFICATION
	IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							AREA, SQ. MI.	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.	Put "1" in space						
6	RUNOFF	1				6											
								SURF. ELEV. AT T=0, FT.									
6	RESVOR	2			6	7											
								LENGTH FT	(OPTIONAL) ROUTING COEFFICIENT (C)								
6	REACH	3	011		7		5	700.	0.91								25
								AREA, SQ MI	RUNOFF CURVE NO.	TIME OF CONCENTRATION, HRS.							
6	RUNOFF	1	011				6	0.04	75.	0.09	1		1		1		32
6	ADDHYD	4	011		5	6	7				1	1	1		1		31
6	SAVMOV	5															
6	SAVMOV	6															
6	ADDHYD	4			5	6	7										
6	SAVMOV	5															
					IN-PUT	OUT-PUT1	OUT-PUT2	OUTPUT 1 DISCHARGE, CFS	OUTPUT 1 Percent D. A. Split	OUTPUT 2 Diversion Table ID							
6	DIVERT	6															

32

ENDATA	NOTE: This card is to be used only at end of all standard control cards.

SCS-ENG-2
Rev. 5-73

U. S. DEPARTMENT [illegible]ICULTURE
SOIL CONSE[illegible]N SERVICE

MODIFY STANDARD CONTROL

Watershed _____ Hydrologist _____ Date _____

DATA CODE	OPERATION NAME	OPERATION NO.	XSECTN / STRUCTURE XSECTN NO.	XSECTN / STRUCTURE STRUCT. NO.	HYDROGRAPH NUMBER INPUT #1	HYDROGRAPH NUMBER INPUT #2	HYDROGRAPH NUMBER OUT-PUT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	OUTPUT OPTIONS PRINT PEAK	PRINT HYD	PRINT ELEV	PRINT VOL	PUNCH	SUM	CARD NO. / IDENTIFICATION

IMPORTANT: Line out unused cards. Data fields require decimal points. **KEYPUNCHER:** Left justify data fields.

IMPORTANT: Modifications must be given in the order that they appear on the standard control list.

7	INSERT	2						NOTE: The following cards are inserted following the XSECTN / STRUCTURE specified.									
6																	
6																	
6																	
6																	
7	ALTER	3						NOTE: Data given in columns 1 to 18 must be identical with standard control card to be altered.									
6																	
6																	
6																	
6																	
7	DELETE	4						NOTE: Data given in columns 1 to 18 must be identical with standard control card to be deleted.									
6																	
6																	
6																	
6																	
7	LIST							NOTE: This card is used for printout of tabular data and standard control list that are currently effective.									33
7	UPDATE	1						NOTE: This card is used to make permanent changes of the library tape. Printout of library tape follows changes.									
								NEW BASE FLOW, CFS OR VOLUME IN INCHES	PEAK TIME IN HOURS	BASE TIME IN HOURS							
7	BASFLO	5						105.									34

SCS-ENG-2
REV. 5-72

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

EXECUTIVE CONTROL FOR WATERSHED

(12)

SCS - 274
Rev. 2-68

Watershed: Building Wash Hydrologist: Hem Date: 12/21/83

DATA CODE	OPERATION NAME	OPERATION NO.	FROM XSECTN OR STRUCT	THRU (1) XSECTN OR STRUCT	DATA FIELD #1	DATA FIELD #2	DATA FIELD #3	RAIN TABLE NO.	AMC	ALTERNATE NO.	STORM NO.	CARD NO./ IDENTIFICATION
					IMPORTANT: Line out unused cards. Data fields require decimal points. KEYPUNCHER: Left justify data fields.							
					MAIN TIME INCREMENT, HRS.	(This increment is required for initial computations. Remains in force until new increment is entered or permanent data changed.)						
7	INCREM	6			0.10 0.20							35
7	COMPUT	7	001	011	0.0	1.45	1.0	2	2	01	01	36
	ENDCMP	1			NOTE: This card is required at "end" of a watershed; it may follow a series of COMPUT cards.							37
7	COMPUT	7	001	011	0.0	2.58	1.0	2	2	01	02	38
	ENDCMP	1			NOTE: This card is required at "end" of a watershed; it may follow a series of COMPUT cards.							39
7	COMPUT	7	001	011	0.0	4.05	1.0	2	2	01	03	40
	ENDCMP	1			NOTE: This card is required at "end" of a watershed; it may follow a series of COMPUT cards.							41
7	COMPUT	7										
	ENDCMP	1			NOTE: This card is required at "end" of a watershed; it may follow a series of COMPUT cards.							
	ENDJOB	2			NOTE: This card terminates the entire watershed program.							42

(1) Starting from the beginning or from the end of the preceding COMPUT card, the program will start with the 1st operation on the standard control list having the XSECTN / STRUCT under FROM and will perform all operations through the 1st appearance of the XSECTN / STRUCT under THRU. Two or more COMPUT cards in series will normally cover successive parts of the standard control list.

BULLDOG WASH, DESIGN HYDROLOGY

12/21/83

TR-20 HYDROLOGY

VOID
See all TR 20 Runs Dated 11/22/83
Hm

VOID - DUE TO RE-DELINEATION OF DRAINAGE AREAS TO SUB-INLETS.
Hm

BULLDOG WASH
DESIGN HYDROLOGY

(DES/TR20.BDWH)

2-YEAR, 24-HOUR
10-YEAR, 24-HOUR
100-YEAR, 24 HOUR

NOTE!! 105CFS BASE FLOW (P. SPILLWAY) FROM APACHE JUNCT FROS WAS ADDED TO EACH STORM EXCEPT 2-YR WORK PLAN SUPPLEMENT DATED JUNE 1976

EXECUTIVE CONTROL CARD 33 OPERATION LIST

LISTING OF DATA IN CORE

0 BULLDOG WASH,DESIGN HYDROLOGY

VELOCITY INCREMENT

1 CTABLE .2000

8	.0000	.0800	.1800	.2500	.3200
8	.3700	.4100	.4500	.4900	.5100
8	.5400	.5700	.5900	.6100	.6300
8	.6500	.6600	.6700	.6900	.7000
8	.7100	.7200	.7300	.7400	.7500
8	.7600	.7700	.7700	.7800	.7900
8	.7900	.8000	.8100	.8100	.8200
8	.8200	.8300	.8300	.8400	.8400
8	.8400	.8500	.8500	.8600	.8600
8	.8600	.8600	.8700	.8700	.8700
8	.8800	.8800	.8800	.8900	.8900
8	.8900	.8900	.8900	.8900	.9000
8	.9000	.9000	.9000	.9000	.9100
8	.9100	.9100	.9100	.9100	.9100
8	.9200	.9200	.9200	.9200	.9200
8	.9200	.9200	.9200	.9300	.9300

9 ENDTBL

TIME INCREMENT

4 DIMHYD

8	.0000	.0300	.1000	.1900	.3100
8	.4700	.6600	.8200	.9300	.9900
8	1.0000	.9900	.9300	.8600	.7800
8	.6800	.5600	.4600	.3900	.3300
8	.2800	.2410	.2070	.1740	.1470
8	.1260	.1070	.0910	.0770	.0660
8	.0550	.0470	.0400	.0340	.0290
8	.0250	.0210	.0180	.0150	.0130
8	.0110	.0090	.0080	.0070	.0060
8	.0050	.0040	.0030	.0020	.0010
8	.0000	.0000	.0000	.0000	.0000

9 ENDTBL

COMPUTED PEAK K FACTOR = 484.00

TIME INCREMENT

5 RAINFL 1 .5000

2-YEAR
24 HOUR

PASS= 1

```
EXECUTIVE CONTROL CARD        34   OPERATION  BASFLO,    NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********   OPERATION
EXECUTIVE CONTROL CARD        35   OPERATION  INCREM,    MAIN TIME INCREMENT=   .10
EXECUTIVE CONTROL CARD        36   OPERATION  COMPUT,    FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  11/  0
        STARTING TIME=    .00      RAIN DEPTH=  1.45   RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
        ALTERNATE NO.= 1           STORM NO.= 1
```

```
SUBROUTINE RUNOFF    CROSS SECTION   1
           AREA=    .04     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .08

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              11.99                          3.464                      (RUNOFF)
              12.46                          1.092                      (RUNOFF)
              12.96                           .626                      (RUNOFF)
              13.46                           .490                      (RUNOFF)
              13.96                           .398                      (RUNOFF)
              14.46                           .354                      (RUNOFF)
              14.96                           .326                      (RUNOFF)
              15.45                           .294                      (RUNOFF)
              15.96                           .257                      (RUNOFF)
              16.95                           .245                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1476        CFS-HRS=        3.81        ACRE-FT=        .31

SUBROUTINE REACH     CROSS SECTION   2
           LENGTH=   1839.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .42

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.03                        107.806                       (NULL)
              12.47                        106.048                       (NULL)
              12.96                        105.613                       (NULL)
              13.46                        105.482                       (NULL)
              13.96                        105.394                       (NULL)
              14.46                        105.351                       (NULL)
              14.96                        105.324                       (NULL)
              15.46                        105.292                       (NULL)
              15.96                        105.255                       (NULL)
              16.96                        105.244                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA= 121.7650        CFS-HRS=     3143.34        ACRE-FT=     259.77

SUBROUTINE RUNOFF    CROSS SECTION   2
           AREA=    .14     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .17

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.06                          8.793                      (RUNOFF)
              12.46                          3.629                      (RUNOFF)
              12.96                          2.132                      (RUNOFF)
              13.46                          1.678                      (RUNOFF)
              13.96                          1.373                      (RUNOFF)
              14.46                          1.226                      (RUNOFF)
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```
   14.96                          1.129                    (RUNOFF)
   15.46                          1.018                    (RUNOFF)
   15.96                           .892                    (RUNOFF)
   16.96                           .851                    (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1489        CFS-HRS=       13.45        ACRE-FT=       1.11


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                 PEAK DISCHARGES              PEAK ELEVATIONS
              12.05                       116.624                      (NULL)
              12.47                       109.676                      (NULL)
              12.96                       107.745                      (NULL)
              13.46                       107.160                      (NULL)
              13.96                       106.767                      (NULL)
              14.46                       106.577                      (NULL)
              14.96                       106.452                      (NULL)
              15.46                       106.310                      (NULL)
              15.96                       106.147                      (NULL)
              16.96                       106.094                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=  27.1747        CFS-HRS=     3156.79        ACRE-FT=     260.88


SUBROUTINE REACH     CROSS SECTION   3
           LENGTH=    540.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION   3
           AREA=    .94     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                 PEAK DISCHARGES              PEAK ELEVATIONS
              12.28                        59.980                    (RUNOFF)
              16.97                         7.147                    (RUNOFF)
              19.47                         5.502                    (RUNOFF)
              21.62                         4.831                    (RUNOFF)
              23.62                         4.235                    (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .2115        CFS-HRS=      128.30        ACRE-FT=      10.60


SUBROUTINE ADDHYD    CROSS SECTION   3
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                 PEAK DISCHARGES              PEAK ELEVATIONS
              12.26                       169.972                      (NULL)
              16.96                       113.241                      (NULL)
              19.46                       111.358                      (NULL)
              21.57                       110.576                      (NULL)
              23.57                       109.888                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.5449        CFS-HRS=     3285.09        ACRE-FT=     271.48
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SUBROUTINE REACH     CROSS SECTION   4
           LENGTH=   1000.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF    CROSS SECTION   4
           AREA=    .06     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.00                          4.802                      (RUNOFF)
              12.46                          1.616                      (RUNOFF)
              12.96                           .932                      (RUNOFF)
              13.46                           .730                      (RUNOFF)
              13.96                           .595                      (RUNOFF)
              14.46                           .530                      (RUNOFF)
              14.96                           .488                      (RUNOFF)
              15.45                           .440                      (RUNOFF)
              15.96                           .384                      (RUNOFF)
              16.95                           .367                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1476        CFS-HRS=        5.72        ACRE-FT=        .47

SUBROUTINE ADDHYD    CROSS SECTION   4
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.29                        170.864                       (NULL)
              16.96                        113.605                       (NULL)
              19.46                        111.642                       (NULL)
              21.56                        110.805                       (NULL)
              23.56                        110.086                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.3213        CFS-HRS=     3290.80        ACRE-FT=     271.95

SUBROUTINE REACH     CROSS SECTION   5
           LENGTH=   1030.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .22

SUBROUTINE RUNOFF    CROSS SECTION   5
           AREA=    .35     INPUT RUNOFF CURVE=  77.0     TIME OF CONCENTRATION=   .39

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.18                         22.586                      (RUNOFF)
              16.99                          2.473                      (RUNOFF)
              19.47                          1.916                      (RUNOFF)
              20.45                          1.711                      (RUNOFF)
              21.55                          1.711                      (RUNOFF)
              23.55                          1.505                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1890        CFS-HRS=       42.69        ACRE-FT=       3.53
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SUBROUTINE ADDHYD    CROSS SECTION    5
           INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.26                         190.086                      (NULL)
              16.97                         116.075                      (NULL)
              19.47                         113.555                      (NULL)
              21.58                         112.507                      (NULL)
              23.58                         111.582                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.3760        CFS-HRS=     3333.50        ACRE-FT=     275.48

SUBROUTINE REACH     CROSS SECTION    6
           LENGTH=    283.00      INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=   .06

SUBROUTINE RUNOFF    CROSS SECTION    6
           AREA=    .04      INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .13

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.02                          2.839                      (RUNOFF)
              12.47                          1.054                      (RUNOFF)
              12.96                           .614                      (RUNOFF)
              13.46                           .483                      (RUNOFF)
              13.96                           .395                      (RUNOFF)
              14.46                           .352                      (RUNOFF)
              14.96                           .324                      (RUNOFF)
              15.46                           .292                      (RUNOFF)
              15.96                           .256                      (RUNOFF)
              16.96                           .244                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1484        CFS-HRS=        3.83        ACRE-FT=        .32

SUBROUTINE ADDHYD    CROSS SECTION    6
           INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.27                         190.838                      (NULL)
              16.97                         116.317                      (NULL)
              19.47                         113.744                      (NULL)
              21.57                         112.666                      (NULL)
              23.57                         111.721                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.2938        CFS-HRS=     3337.34        ACRE-FT=     275.80

SUBROUTINE REACH     CROSS SECTION    7
           LENGTH=   1050.00      INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467       AVERAGE ROUTING COEFF=  .8800       NUMBER OF ROUTINGS=   .21
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SUBROUTINE RUNOFF     CROSS SECTION    7
           AREA=     .88      INPUT RUNOFF CURVE=  81.0      TIME OF CONCENTRATION=    .59

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.28                           84.330                       (RUNOFF)
              19.47                            6.242                       (RUNOFF)
              21.64                            5.412                       (RUNOFF)
              23.64                            4.710                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=     .2887        CFS-HRS=       163.94        ACRE-FT=       13.55

SUBROUTINE ADDHYD     CROSS SECTION    7
           INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.29                          274.515                        (NULL)
              16.96                          124.536                        (NULL)
              19.47                          119.982                        (NULL)
              21.61                          118.062                        (NULL)
              23.61                          116.416                        (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    2.2144        CFS-HRS=      3501.28        ACRE-FT=      289.35

SUBROUTINE REACH      CROSS SECTION    8
           LENGTH=    350.00      INPUT COEFFICIENT=    .9000      INPUT ROUTINGS=    .00

           AVERAGE WATER VELOCITY=  15.300        AVERAGE ROUTING COEFF=  .9000        NUMBER OF ROUTINGS=    .06

SUBROUTINE RUNOFF     CROSS SECTION    8
           AREA=     .03      INPUT RUNOFF CURVE=  75.0      TIME OF CONCENTRATION=    .08

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              11.99                            2.598                       (RUNOFF)
              12.46                             .819                       (RUNOFF)
              12.96                             .470                       (RUNOFF)
              13.46                             .367                       (RUNOFF)
              13.96                             .299                       (RUNOFF)
              14.46                             .266                       (RUNOFF)
              14.96                             .245                       (RUNOFF)
              15.45                             .221                       (RUNOFF)
              15.96                             .193                       (RUNOFF)
              16.95                             .184                       (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=     .1476        CFS-HRS=         2.86        ACRE-FT=        .24

SUBROUTINE ADDHYD     CROSS SECTION    8
           INPUT HYDROGRAPHS= 5,6      OUTPUT HYDROGRAPH= 7

           PEAK TIMES                    PEAK DISCHARGES                PEAK ELEVATIONS
              12.30                          274.757                        (NULL)
              16.96                          124.720                        (NULL)
              19.47                          120.124                        (NULL)
              21.61                          118.170                        (NULL)
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   23.61                          116.508                          (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.1894        CFS-HRS=     3504.14        ACRE-FT=     289.58

SUBROUTINE REACH     CROSS SECTION   9
           LENGTH=    750.00     INPUT COEFFICIENT=   .9000     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  15.300       AVERAGE ROUTING COEFF=  .9000       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION   9
           AREA=   1.77     INPUT RUNOFF CURVE=  83.0     TIME OF CONCENTRATION=   .43

           PEAK TIMES                   PEAK DISCHARGES                PEAK ELEVATIONS
              12.15                          266.226                      (RUNOFF)
              16.97                           18.674                      (RUNOFF)
              19.46                           14.125                      (RUNOFF)
              21.57                           12.397                      (RUNOFF)
              23.56                           10.782                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .3498        CFS-HRS=      399.61        ACRE-FT=      33.02

SUBROUTINE ADDHYD    CROSS SECTION   9
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                   PEAK DISCHARGES                PEAK ELEVATIONS
              12.20                          524.131                      (NULL)
              16.96                          143.392                      (NULL)
              19.46                          134.245                      (NULL)
              21.59                          130.539                      (NULL)
              23.59                          127.259                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.4233        CFS-HRS=     3903.76        ACRE-FT=     322.61

SUBROUTINE REACH     CROSS SECTION  10
           LENGTH=    810.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
           AREA=    .19     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .31

           PEAK TIMES                   PEAK DISCHARGES                PEAK ELEVATIONS
              12.14                            9.426                      (RUNOFF)
              16.99                            1.147                      (RUNOFF)
              19.47                             .898                      (RUNOFF)
              20.46                             .804                      (RUNOFF)
              21.50                             .811                      (RUNOFF)
              22.45                             .715                      (RUNOFF)
              23.50                             .718                      (PUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .1487        CFS-HRS=       18.24        ACRE-FT=       1.51
```

SUBROUTINE ADDHYD CROSS SECTION 10
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.21	529.310	(NULL)
16.96	144.536	(NULL)
19.47	135.138	(NULL)
21.59	131.319	(NULL)
23.59	127.947	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.3687 CFS-HRS= 3921.99 ACRE-FT= 324.11

SUBROUTINE REACH CROSS SECTION 11
LENGTH= 700.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .10

SUBROUTINE RUNOFF CROSS SECTION 11
AREA= .04 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .09

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.00	3.313	(RUNOFF)
12.46	1.085	(RUNOFF)
12.96	.623	(RUNOFF)
13.46	.489	(RUNOFF)
13.96	.397	(RUNOFF)
14.46	.354	(RUNOFF)
14.96	.326	(RUNOFF)
15.45	.294	(RUNOFF)
15.96	.257	(RUNOFF)
16.95	.245	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .1476 CFS-HRS= 3.81 ACRE-FT= .31

SUBROUTINE ADDHYD CROSS SECTION 11
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.22	527.130	(NULL)
16.96	144.778	(NULL)
19.47	135.325	(NULL)
21.60	131.450	(NULL)
23.60	128.059	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 4.48

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
10.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
11.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.01	108.16	124.06	167.28	251.24
12.00	DISCHG	369.50	477.47	525.47	507.17	456.22	406.07	365.09	329.55	297.55	270.79
13.00	DISCHG	251.42	237.13	225.33	214.97	206.56	200.57	195.84	191.14	186.28	182.02
14.00	DISCHG	178.87	176.40	174.00	171.53	169.41	167.85	166.55	165.17	163.68	162.34
15.00	DISCHG	161.34	160.41	159.23	157.83	156.51	155.50	154.52	153.29	151.82	150.43
16.00	DISCHG	149.36	148.50	147.64	146.75	145.98	145.41	145.06	144.86	144.77	144.75
17.00	DISCHG	144.77	144.65	144.27	143.67	143.06	142.57	142.09	141.46	140.70	139.97
18.00	DISCHG	139.40	138.85	138.17	137.36	136.61	136.02	135.64	135.40	135.27	135.21
19.00	DISCHG	135.19	135.19	135.21	135.25	135.29	135.32	135.18	134.75	134.09	133.41
20.00	DISCHG	132.88	132.51	132.28	132.15	132.08	132.04	131.84	131.37	130.67	129.96
21.00	DISCHG	129.41	129.21	129.45	130.03	130.69	131.23	131.45	131.24	130.71	130.10
22.00	DISCHG	129.60	129.25	129.03	128.89	128.82	128.77	128.56	128.07	127.35	126.62
23.00	DISCHG	126.03	125.83	126.06	126.64	127.31	127.85	128.06	127.84	127.28	126.65
24.00	DISCHG	126.05	124.70	121.94	118.09	114.18	111.10	108.92	107.46	106.54	105.97
25.00	DISCHG	105.61	105.38	105.23	105.14	105.08	105.05	105.03	105.01	105.00	105.00
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.3578 CFS-HRS= 3925.79 ACRE-FT= 324.43

ENDCMP

10-YEAR
24-Hour

PASS= 2

```
EXECUTIVE CONTROL CARD      37A   OPERATION  BASFLO,     NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ********   OPERATION
EXECUTIVE CONTROL CARD       38   OPERATION  COMPUT,     FROM XSECTN/STRUCT   1/  0     TO XSECTN/STRUCT  11/  0
      STARTING TIME=    .00      RAIN DEPTH=  2.58      RAIN DURATION=  1.00     RAIN TABLE NO.= 2     SOIL CONDITION= 2
      ALTERNATE NO.= 1           STORM NO.= 2

SUBROUTINE RUNOFF    CROSS SECTION   1
          AREA=    .04     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .08

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             11.97                         20.210                       (RUNOFF)
             12.45                          4.593                       (RUNOFF)
             12.95                          2.446                       (RUNOFF)
             13.45                          1.835                       (RUNOFF)
             13.95                          1.450                       (RUNOFF)
             14.45                          1.262                       (RUNOFF)
             14.95                          1.141                       (RUNOFF)
             15.45                          1.014                       (RUNOFF)
             15.95                           .874                       (RUNOFF)
             16.95                           .817                       (RUNOFF)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6894        CFS-HRS=       17.80        ACRE-FT=       1.47

SUBROUTINE REACH     CROSS SECTION   2
          LENGTH=   1839.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

          AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .42

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             11.99                        123.166                       (NULL)
             12.46                        109.460                       (NULL)
             12.96                        107.407                       (NULL)
             13.45                        106.812                       (NULL)
             13.96                        106.438                       (NULL)
             14.46                        106.254                       (NULL)
             14.95                        106.134                       (NULL)
             15.45                        106.007                       (NULL)
             15.95                        105.870                       (NULL)
             16.95                        105.813                       (NULL)

          TOTAL WATER, IN INCHES ON DRAINAGE AREA= 122.3123        CFS-HRS=     3157.46        ACRE-FT=     260.93

SUBROUTINE RUNOFF    CROSS SECTION   2
          AREA=    .14     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .17

          PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
             12.00                         59.709                       (RUNOFF)
             12.95                          8.399                       (RUNOFF)
             13.45                          6.319                       (RUNOFF)
             13.95                          5.020                       (RUNOFF)
             14.45                          4.379                       (RUNOFF)
             14.95                          3.958                       (RUNOFF)
             15.45                          3.515                       (RUNOFF)
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   15.95                          3.040                    (RUNOFF)
   16.95                          2.839                    (RUNOFF)
   17.45                          2.605                    (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6969        CFS-HRS=       62.96        ACRE-FT=       5.20


SUBROUTINE ADDHYD    CROSS SECTION   2
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                 PEAK DISCHARGES              PEAK ELEVATIONS
              12.00                        182.809                     (NULL)
              12.95                        115.806                     (NULL)
              13.45                        113.132                     (NULL)
              13.95                        111.458                     (NULL)
              14.45                        110.633                     (NULL)
              14.95                        110.091                     (NULL)
              15.45                        109.521                     (NULL)
              15.95                        108.910                     (NULL)
              16.95                        108.652                     (NULL)
              17.45                        108.351                     (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=  27.7225        CFS-HRS=     3220.43        ACRE-FT=     266.14


SUBROUTINE REACH     CROSS SECTION   3
           LENGTH=    540.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION   3
           AREA=    .94     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .54

           PEAK TIMES                 PEAK DISCHARGES              PEAK ELEVATIONS
              12.20                        326.767                    (RUNOFF)
              19.45                         15.905                    (RUNOFF)
              21.61                         13.718                    (RUNOFF)
              23.62                         11.869                    (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .8389        CFS-HRS=      508.90        ACRE-FT=      42.06


SUBROUTINE ADDHYD    CROSS SECTION   3
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                 PEAK DISCHARGES              PEAK ELEVATIONS
              12.14                        474.227                     (NULL)
              19.45                        123.658                     (NULL)
              21.56                        121.067                     (NULL)
              23.56                        118.896                     (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   5.1594        CFS-HRS=     3729.32        ACRE-FT=     308.19


SUBROUTINE REACH     CROSS SECTION   4
           LENGTH=   1000.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00
```

```
AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF    CROSS SECTION   4
           AREA=    .06     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              11.97                         29.217                      (RUNOFF)
              12.45                          6.830                      (RUNOFF)
              12.95                          3.646                      (RUNOFF)
              13.45                          2.740                      (RUNOFF)
              13.95                          2.168                      (RUNOFF)
              14.45                          1.889                      (RUNOFF)
              14.95                          1.709                      (RUNOFF)
              15.45                          1.518                      (RUNOFF)
              15.95                          1.308                      (RUNOFF)
              16.95                          1.223                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6898        CFS-HRS=       26.71        ACRE-FT=       2.21

SUBROUTINE ADDHYD    CROSS SECTION   4
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.15                         475.390                      (NULL)
              19.45                         124.576                      (NULL)
              21.55                         121.798                      (NULL)
              23.55                         119.518                      (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.9322        CFS-HRS=     3756.03        ACRE-FT=     310.40

SUBROUTINE REACH     CROSS SECTION   5
           LENGTH=   1030.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .22

SUBROUTINE RUNOFF    CROSS SECTION   5
           AREA=    .35     INPUT RUNOFF CURVE=  77.0     TIME OF CONCENTRATION=   .39

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.11                         134.314                      (RUNOFF)
              16.96                           7.629                      (RUNOFF)
              19.45                           5.725                      (RUNOFF)
              21.55                           5.017                      (RUNOFF)
              23.55                           4.353                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .7897        CFS-HRS=      178.37        ACRE-FT=      14.74

SUBROUTINE ADDHYD    CROSS SECTION   5
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
              12.15                         604.855                      (NULL)
```

```
   19.45                    130.293                    (NULL)
   21.57                    126.790                    (NULL)
   23.57                    123.845                    (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.9846      CFS-HRS=     3934.48      ACRE-FT=     325.15

SUBROUTINE REACH     CROSS SECTION   6
           LENGTH=    283.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467      AVERAGE ROUTING COEFF=  .8800      NUMBER OF ROUTINGS=   .06

SUBROUTINE RUNOFF    CROSS SECTION   6
           AREA=    .04     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .13

           PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
   11.98                                18.268                      (RUNOFF)
   12.46                                 4.485                      (RUNOFF)
   12.95                                 2.411                      (RUNOFF)
   13.45                                 1.816                      (RUNOFF)
   13.95                                 1.440                      (RUNOFF)
   14.45                                 1.255                      (RUNOFF)
   14.95                                 1.135                      (RUNOFF)
   15.45                                 1.007                      (RUNOFF)
   15.95                                  .870                      (RUNOFF)
   16.95                                  .813                      (RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6939      CFS-HRS=       17.91      ACRE-FT=       1.48

SUBROUTINE ADDHYD    CROSS SECTION   6
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
   12.15                               610.768                      (NULL)
   19.45                               130.906                      (NULL)
   21.56                               127.295                      (NULL)
   23.56                               124.279                      (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.9008      CFS-HRS=     3952.41      ACRE-FT=     326.63

SUBROUTINE REACH     CROSS SECTION   7
           LENGTH=   1050.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467      AVERAGE ROUTING COEFF=  .8800      NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF    CROSS SECTION   7
           AREA=    .88     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .59

           PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
   12.22                               357.309                      (RUNOFF)
   19.45                                16.431                      (RUNOFF)
   21.64                                14.042                      (RUNOFF)
   23.64                                12.095                      (RUNOFF)
```

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .9979 CFS-HRS= 566.71 ACRE-FT= 46.83

SUBROUTINE ADDHYD CROSS SECTION 7
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.19	957.373	(NULL)
19.45	147.327	(NULL)
21.60	141.290	(NULL)
23.60	136.328	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.8581 CFS-HRS= 4519.17 ACRE-FT= 373.46

SUBROUTINE REACH CROSS SECTION 8
LENGTH= 350.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 8
AREA= .03 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .08

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.97	15.158	(RUNOFF)
12.45	3.445	(RUNOFF)
12.95	1.835	(RUNOFF)
13.45	1.376	(RUNOFF)
13.95	1.088	(RUNOFF)
14.45	.947	(RUNOFF)
14.95	.856	(RUNOFF)
15.45	.761	(RUNOFF)
15.95	.655	(RUNOFF)
16.95	.613	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6894 CFS-HRS= 13.35 ACRE-FT= 1.10

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.20	958.037	(NULL)
19.45	147.788	(NULL)
21.60	141.633	(NULL)
23.60	136.517	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.8319 CFS-HRS= 4532.53 ACRE-FT= 374.57

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

```
SUBROUTINE RUNOFF    CROSS SECTION   9
           AREA=   1.77     INPUT RUNOFF CURVE=  83.0     TIME OF CONCENTRATION=   .43

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.11                        963.172                      (RUNOFF)
              19.43                         35.080                      (RUNOFF)
              21.56                         30.451                      (RUNOFF)
              23.56                         26.250                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.1146        CFS-HRS=     1273.24        ACRE-FT=     105.22

SUBROUTINE ADDHYD    CROSS SECTION   9
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.15                       1886.913                       (NULL)
              19.45                        182.884                       (NULL)
              21.59                        172.021                       (NULL)
              23.58                        162.799                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.1167        CFS-HRS=     5805.82        ACRE-FT=     479.79

SUBROUTINE REACH     CROSS SECTION  10
           LENGTH=    810.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12

SUBROUTINE RUNOFF    CROSS SECTION  10
           AREA=    .19     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .31

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.08                         68.832                      (RUNOFF)
              16.97                          3.836                      (RUNOFF)
              19.46                          2.892                      (RUNOFF)
              20.45                          2.559                      (RUNOFF)
              21.50                          2.555                      (RUNOFF)
              22.45                          2.234                      (RUNOFF)
              23.50                          2.224                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=    .6966        CFS-HRS=       85.42        ACRE-FT=       7.06

SUBROUTINE ADDHYD    CROSS SECTION  10
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.16                       1928.066                       (NULL)
              19.45                        185.767                       (NULL)
              21.59                        174.493                       (NULL)
              23.59                        164.943                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.0560        CFS-HRS=     5891.26        ACRE-FT=     486.85
```

SUBROUTINE REACH CROSS SECTION 11
LENGTH= 700.00 INPUT COEFFICIENT= .9100 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 17.189 AVERAGE ROUTING COEFF= .9100 NUMBER OF ROUTINGS= .10

SUBROUTINE RUNOFF CROSS SECTION 11
AREA= .04 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .09

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.97	19.769	(RUNOFF)
12.45	4.575	(RUNOFF)
12.95	2.438	(RUNOFF)
13.45	1.833	(RUNOFF)
13.95	1.448	(RUNOFF)
14.45	1.261	(RUNOFF)
14.95	1.140	(RUNOFF)
15.45	1.013	(RUNOFF)
15.95	.873	(RUNOFF)
16.95	.816	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= .6893 CFS-HRS= 17.79 ACRE-FT= 1.47

SUBROUTINE ADDHYD CROSS SECTION 11
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.17	1921.834	(NULL)
19.45	186.376	(NULL)
21.60	174.921	(NULL)
23.59	165.301	(NULL)

HYDROGRAPH, TZERO= .00 DELTA T= .10 DRAINAGE AREA= 4.48

TIME											
.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
1.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
2.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
3.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
4.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
5.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
6.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
7.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
8.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
9.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.03	105.17	105.50	106.03	106.73
10.00	DISCHG	107.53	108.46	109.65	111.14	112.82	114.64	116.76	119.59	123.15	127.04
11.00	DISCHG	131.02	135.92	143.23	153.40	165.26	178.80	240.67	420.66	742.07	1155.28
12.00	DISCHG	1583.97	1871.23	1910.30	1728.48	1461.95	1222.08	1031.68	877.64	749.50	647.52
13.00	DISCHG	574.34	520.60	477.54	441.49	412.73	392.04	375.54	359.76	344.15	330.68
14.00	DISCHG	320.62	312.58	304.88	297.17	290.55	285.57	281.33	276.91	272.25	268.08
15.00	DISCHG	264.91	261.86	258.19	253.95	249.98	246.89	243.83	240.12	235.80	231.76
16.00	DISCHG	228.61	226.00	223.42	220.80	218.51	216.80	215.66	214.97	214.58	214.39
17.00	DISCHG	214.30	213.82	212.62	210.87	209.09	207.66	206.20	204.37	202.19	200.12
18.00	DISCHG	198.49	196.89	194.95	192.69	190.57	188.92	187.81	187.10	186.67	186.43
19.00	DISCHG	186.31	186.25	186.25	186.27	186.31	186.32	185.87	184.64	182.83	180.98
20.00	DISCHG	179.50	178.47	177.80	177.40	177.16	177.01	176.41	175.09	173.20	171.30
21.00	DISCHG	169.80	169.27	169.88	171.35	173.03	174.41	174.92	174.31	172.87	171.25
22.00	DISCHG	169.91	168.95	168.32	167.94	167.71	167.54	166.93	165.60	163.68	161.74

23.00	DISCHG	160.20	159.65	160.26	161.74	163.43	164.81	165.30	164.67	163.20	161.55
24.00	DISCHG	159.98	156.32	149.05	139.03	128.93	120.94	115.26	111.46	109.06	107.55
25.00	DISCHG	106.59	105.99	105.61	105.37	105.22	105.13	105.08	105.04	105.02	105.00
26.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
27.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
28.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00
29.00	DISCHG	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00	105.00

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.0438 CFS-HRS= 5909.07 ACRE-FT= 488.33

ENDCMP

100-YEAR
24-HOUR

PASS= 3

EXECUTIVE CONTROL CARD 39A OPERATION BASFLO. NEW BASE FLOW= 105.00
EXECUTIVE CONTROL CARD ******** OPERATION FROM XSECTN/STRUCT 1/ 0 TO XSECTN/STRUCT 11/ 0
EXECUTIVE CONTROL CARD 40 OPERATION COMPUT. RAIN DURATION= 1.00 RAIN TABLE NO.= 2 SOIL CONDITION= 2
STARTING TIME= .00 RAIN DEPTH= 4.05
ALTERNATE NO.= 1 STORM NO.= 3

SUBROUTINE RUNOFF CROSS SECTION 1 TIME OF CONCENTRATION= .08
AREA= .04 INPUT RUNOFF CURVE= 75.0

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.96	48.651	(RUNOFF)
12.45	10.147	(RUNOFF)
12.95	5.284	(RUNOFF)
13.45	3.910	(RUNOFF)
13.95	3.061	(RUNOFF)
14.45	2.644	(RUNOFF)
14.95	2.376	(RUNOFF)
15.45	2.100	(RUNOFF)
15.95	1.800	(RUNOFF)
16.95	1.670	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6789 CFS-HRS= 43.34 ACRE-FT= 3.58

SUBROUTINE REACH CROSS SECTION 2 INPUT ROUTINGS= .00
LENGTH= 1839.00 INPUT COEFFICIENT= .8600
AVERAGE WATER VELOCITY= 10.443 AVERAGE ROUTING COEFF= .8600 NUMBER OF ROUTINGS= .42

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.97	149.893	(NULL)
12.45	114.889	(NULL)
12.95	110.208	(NULL)
13.45	108.867	(NULL)
13.95	108.038	(NULL)
14.45	107.629	(NULL)
14.95	107.361	(NULL)
15.45	107.085	(NULL)
15.95	106.793	(NULL)
16.95	106.663	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 123.3152 CFS-HRS= 3183.36 ACRE-FT= 263.07

SUBROUTINE RUNOFF CROSS SECTION 2 TIME OF CONCENTRATION= .17
AREA= .14 INPUT RUNOFF CURVE= 75.0

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.98	149.859	(RUNOFF)
14.45	9.183	(RUNOFF)
14.95	8.246	(RUNOFF)
16.95	5.810	(RUNOFF)
19.45	4.322	(RUNOFF)
20.45	3.807	(RUNOFF)
21.46	3.826	(RUNOFF)

```
      22.45                          3.303                    (RUNOFF)
      23.45                          3.314                    (RUNOFF)

    TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.7020        CFS-HRS=      153.77        ACRE-FT=      12.71


SUBROUTINE ADDHYD    CROSS SECTION   2
    INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

    PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
      11.98                          299.681                     (NULL)
      13.45                          122.358                     (NULL)
      13.95                          118.648                     (NULL)
      14.45                          116.812                     (NULL)
      14.95                          115.607                     (NULL)
      15.45                          114.367                     (NULL)
      15.95                          113.063                     (NULL)
      16.95                          112.473                     (NULL)
      19.45                          110.559                     (NULL)
      21.45                          109.923                     (NULL)

    TOTAL WATER, IN INCHES ON DRAINAGE AREA=  28.7271        CFS-HRS=     3337.13        ACRE-FT=     275.78


SUBROUTINE REACH     CROSS SECTION   3
    LENGTH=    540.00     INPUT COEFFICIENT=   .8600     INPUT ROUTINGS=   .00

    AVERAGE WATER VELOCITY=  10.443       AVERAGE ROUTING COEFF=  .8600       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION   3
    AREA=    .94     INPUT RUNOFF CURVE=  78.0     TIME OF CONCENTRATION=   .54

    PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
      12.17                          794.530                    (RUNOFF)
      19.38                           30.726                    (RUNOFF)
      21.61                           26.305                    (RUNOFF)
      23.62                           22.631                    (RUNOFF)

    TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.9232        CFS-HRS=     1166.73        ACRE-FT=      96.42


SUBROUTINE ADDHYD    CROSS SECTION   3
    INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

    PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
      12.11                         1020.709                     (NULL)
      19.39                          141.250                     (NULL)
      21.56                          136.012                     (NULL)
      23.56                          131.665                     (NULL)

    TOTAL WATER, IN INCHES ON DRAINAGE AREA=   6.2310        CFS-HRS=     4503.85        ACRE-FT=     372.20


SUBROUTINE REACH     CROSS SECTION   4
    LENGTH=   1000.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00
```

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        AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .21

SUBROUTINE RUNOFF    CROSS SECTION   4
        AREA=    .06     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .10

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           11.96                         71.040                      (RUNOFF)
           12.45                         15.108                      (RUNOFF)
           12.95                          7.881                      (RUNOFF)
           13.45                          5.842                      (RUNOFF)
           13.95                          4.578                      (RUNOFF)
           14.45                          3.959                      (RUNOFF)
           14.95                          3.558                      (RUNOFF)
           15.45                          3.143                      (RUNOFF)
           15.95                          2.697                      (RUNOFF)
           16.95                          2.502                      (RUNOFF)

        TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6823        CFS-HRS=       65.14        ACRE-FT=       5.38

SUBROUTINE ADDHYD    CROSS SECTION   4
        INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           12.12                       1032.487                       (NULL)
           19.41                        143.090                       (NULL)
           21.55                        137.509                       (NULL)
           23.55                        132.935                       (NULL)

        TOTAL WATER, IN INCHES ON DRAINAGE AREA=   5.9997        CFS-HRS=     4569.01        ACRE-FT=     377.58

SUBROUTINE REACH     CROSS SECTION   5
        LENGTH=   1030.00     INPUT COEFFICIENT=   .8700     INPUT ROUTINGS=   .00

        AVERAGE WATER VELOCITY=  11.377       AVERAGE ROUTING COEFF=  .8700       NUMBER OF ROUTINGS=   .22

SUBROUTINE RUNOFF    CROSS SECTION   5
        AREA=    .35     INPUT RUNOFF CURVE=  77.0     TIME OF CONCENTRATION=   .39

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           12.09                        331.691                      (RUNOFF)
           16.95                         15.145                      (RUNOFF)
           19.45                         11.218                      (RUNOFF)
           21.55                          9.743                      (RUNOFF)
           23.55                          8.412                      (RUNOFF)

        TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.8483        CFS-HRS=      417.50        ACRE-FT=      34.50

SUBROUTINE ADDHYD    CROSS SECTION   5
        INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

        PEAK TIMES                  PEAK DISCHARGES              PEAK ELEVATIONS
           12.12                       1352.309                       (NULL)
```

```
   19.42                    154.297                    (NULL)
   21.56                    147.187                    (NULL)
   23.57                    141.273                    (NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA=   5.0504      CFS-HRS=     4986.79      ACRE-FT=     412.11


SUBROUTINE REACH     CROSS SECTION   6
           LENGTH=    283.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467      AVERAGE ROUTING COEFF=  .8800      NUMBER OF ROUTINGS=   .06


SUBROUTINE RUNOFF    CROSS SECTION   6
           AREA=    .04     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .13

           PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
              11.97                      45.103                     (RUNOFF)
              12.45                       9.942                     (RUNOFF)
              12.95                       5.215                     (RUNOFF)
              13.45                       3.873                     (RUNOFF)
              13.95                       3.041                     (RUNOFF)
              14.45                       2.631                     (RUNOFF)
              14.95                       2.364                     (RUNOFF)
              15.45                       2.087                     (RUNOFF)
              15.95                       1.794                     (RUNOFF)
              16.95                       1.664                     (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.6936      CFS-HRS=       43.72      ACRE-FT=       3.61


SUBROUTINE ADDHYD    CROSS SECTION   6
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
              12.12                    1370.198                     (NULL)
              19.45                     155.585                     (NULL)
              21.56                     148.201                     (NULL)
              23.56                     142.137                     (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   4.9649      CFS-HRS=     5030.55      ACRE-FT=     415.72


SUBROUTINE REACH     CROSS SECTION   7
           LENGTH=   1050.00     INPUT COEFFICIENT=   .8800     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  12.467      AVERAGE ROUTING COEFF=  .8800      NUMBER OF ROUTINGS=   .21


SUBROUTINE RUNOFF    CROSS SECTION   7
           AREA=    .88     INPUT RUNOFF CURVE=  81.0     TIME OF CONCENTRATION=   .59

           PEAK TIMES                PEAK DISCHARGES              PEAK ELEVATIONS
              12.20                     803.066                     (RUNOFF)
              21.64                      25.878                     (RUNOFF)
              23.64                      22.186                     (RUNOFF)
```

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 2.1593 CFS-HRS= 1226.35 ACRE-FT= 101.35

SUBROUTINE ADDHYD CROSS SECTION 7
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.16	2141.856	(NULL)
19.38	185.993	(NULL)
21.60	173.987	(NULL)
23.60	164.233	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.9573 CFS-HRS= 6257.07 ACRE-FT= 517.08

SUBROUTINE REACH CROSS SECTION 8
LENGTH= 350.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .06

SUBROUTINE RUNOFF CROSS SECTION 8
AREA= .03 INPUT RUNOFF CURVE= 75.0 TIME OF CONCENTRATION= .08

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
11.96	36.488	(RUNOFF)
12.45	7.610	(RUNOFF)
12.95	3.963	(RUNOFF)
13.45	2.933	(RUNOFF)
13.95	2.296	(RUNOFF)
14.45	1.983	(RUNOFF)
14.95	1.782	(RUNOFF)
15.45	1.575	(RUNOFF)
15.95	1.350	(RUNOFF)
16.95	1.253	(RUNOFF)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 1.6789 CFS-HRS= 32.50 ACRE-FT= 2.69

SUBROUTINE ADDHYD CROSS SECTION 8
INPUT HYDROGRAPHS= 5,6 OUTPUT HYDROGRAPH= 7

PEAK TIMES	PEAK DISCHARGES	PEAK ELEVATIONS
12.17	2143.890	(NULL)
19.38	186.914	(NULL)
21.60	174.675	(NULL)
23.60	164.809	(NULL)

TOTAL WATER, IN INCHES ON DRAINAGE AREA= 3.9297 CFS-HRS= 6289.60 ACRE-FT= 519.77

SUBROUTINE REACH CROSS SECTION 9
LENGTH= 750.00 INPUT COEFFICIENT= .9000 INPUT ROUTINGS= .00

AVERAGE WATER VELOCITY= 15.300 AVERAGE ROUTING COEFF= .9000 NUMBER OF ROUTINGS= .12

```
SUBROUTINE RUNOFF    CROSS SECTION   9
           AREA=   1.77     INPUT RUNOFF CURVE=  83.0     TIME OF CONCENTRATION=   .43

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.10                        2043.145                      (RUNOFF)
              19.39                          63.400                      (RUNOFF)
              21.56                          54.733                      (RUNOFF)
              23.56                          46.990                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   2.3255        CFS-HRS=     2656.38        ACRE-FT=     219.52


SUBROUTINE ADDHYD    CROSS SECTION   9
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.13                        4135.549                       (NULL)
              19.38                         250.313                       (NULL)
              21.58                         229.300                       (NULL)
              23.58                         211.683                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.2617        CFS-HRS=     8946.15        ACRE-FT=     739.31


SUBROUTINE REACH     CROSS SECTION  10
           LENGTH=    810.00     INPUT COEFFICIENT=   .9100     INPUT ROUTINGS=   .00

           AVERAGE WATER VELOCITY=  17.189       AVERAGE ROUTING COEFF=  .9100       NUMBER OF ROUTINGS=   .12


SUBROUTINE RUNOFF    CROSS SECTION  10
           AREA=    .19     INPUT RUNOFF CURVE=  75.0     TIME OF CONCENTRATION=   .31

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.06                         177.758                      (RUNOFF)
              16.96                           7.855                      (RUNOFF)
              19.45                           5.838                      (RUNOFF)
              20.45                           5.142                      (RUNOFF)
              21.50                           5.114                      (RUNOFF)
              23.50                           4.421                      (RUNOFF)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   1.7019        CFS-HRS=      208.68        ACRE-FT=      17.25


SUBROUTINE ADDHYD    CROSS SECTION  10
           INPUT HYDROGRAPHS= 5,6     OUTPUT HYDROGRAPH= 7

           PEAK TIMES                  PEAK DISCHARGES                PEAK ELEVATIONS
              12.13                        4268.070                       (NULL)
              19.39                         256.137                       (NULL)
              21.59                         234.258                       (NULL)
              23.59                         215.957                       (NULL)

           TOTAL WATER, IN INCHES ON DRAINAGE AREA=   3.1950        CFS-HRS=     9154.94        ACRE-FT=     756.56


SUBROUTINE REACH     CROSS SECTION  11
```

SUMMARY TABLE 1

ALT	STORM	ID	DA SQ-MI.	RAIN TBLE	AMC	DELTA-T HRS.	TZERO HRS.	PRECIP IN.	PRECIP DURATION	PEAK-Q CFS	PEAK-TIME	PEAK-ELEV	RUNOFF IN.	CSM
1	1	1 4A	.04	2	2	.10	.00	1.45	24.00	3.46	11.99	.00	.15	86.61
1	1	2	.04	2	2	.10	.00	1.45	24.00	107.81	12.03	.00	121.76	2695.14
1	1	2 4B	.14	2	2	.10	.00	1.45	24.00	8.79	12.06	.00	.15	62.81
1	1	2	.18	2	2	.10	.00	1.45	24.00	116.62	12.05	.00	27.17	647.91
1	1	3 4C	.94	2	2	.10	.00	1.45	24.00	59.98	12.28	.00	.21	63.81
1	1	3	1.12	2	2	.10	.00	1.45	24.00	169.97	12.26	.00	4.54	151.76
1	1	4 4D	.06	2	2	.10	.00	1.45	24.00	4.80	12.00	.00	.15	80.03
1	1	4	1.18	2	2	.10	.00	1.45	24.00	170.86	12.29	.00	4.32	144.80
1	1	4 4E	.35	2	2	.10	.00	1.45	24.00	22.59	12.18	.00	.19	64.53
1	1	5	1.53	2	2	.10	.00	1.45	24.00	190.09	12.26	.00	3.38	124.24
1	1	5 4F	.04	2	2	.10	.00	1.45	24.00	2.84	12.02	.00	.15	70.97
1	1	6	1.57	2	2	.10	.00	1.45	24.00	190.84	12.27	.00	3.29	121.55
1	1	7 4G	.88	2	2	.10	.00	1.45	24.00	84.33	12.28	.00	.29	95.83
1	1	7	2.45	2	2	.10	.00	1.45	24.00	274.51	12.29	.00	2.21	112.05
1	1	8 4H	.03	2	2	.10	.00	1.45	24.00	2.60	11.99	.00	.15	86.61
1	1	8	2.48	2	2	.10	.00	1.45	24.00	274.76	12.30	.00	2.19	110.79
1	1	9 5A	1.77	2	2	.10	.00	1.45	24.00	266.23	12.15	.00	.35	150.41
1	1	9	4.25	2	2	.10	.00	1.45	24.00	524.13	12.20	.00	1.42	123.32
1	1	10 5B	.19	2	2	.10	.00	1.45	24.00	9.43	12.14	.00	.15	49.61
1	1	10	4.44	2	2	.10	.00	1.45	24.00	529.31	12.21	.00	1.37	119.21
1	1	11 5C	.04	2	2	.10	.00	1.45	24.00	3.31	12.00	.00	.15	82.83
1	1	11	4.48	2	2	.10	.00	1.45	24.00	527.13	12.22	.00	1.36	117.66
1	2	1 4A	.04	2	2	.10	.00	2.58	24.00	20.21	11.97	.00	.69	505.25
1	2	2	.04	2	2	.10	.00	2.58	24.00	123.17	11.99	.00	122.31	3079.16
1	2	2 4B	.14	2	2	.10	.00	2.58	24.00	59.71	12.00	.00	.70	426.50
1	2	2	.18	2	2	.10	.00	2.58	24.00	182.81	12.00	.00	27.72	1015.60
1	2	3 4C	.94	2	2	.10	.00	2.58	24.00	326.77	12.20	.00	.84	347.62
1	2	3	1.12	2	2	.10	.00	2.58	24.00	474.23	12.14	.00	5.16	423.42
1	2	4 4D	.06	2	2	.10	.00	2.58	24.00	29.22	11.97	.00	.69	486.94
1	2	4	1.18	2	2	.10	.00	2.58	24.00	475.39	12.15	.00	4.93	402.87
1	2	4 4E	.35	2	2	.10	.00	2.58	24.00	134.31	12.11	.00	.79	383.76
1	2	5	1.53	2	2	.10	.00	2.58	24.00	604.85	12.15	.00	3.98	395.33
1	2	5 4F	.04	2	2	.10	.00	2.58	24.00	18.27	11.98	.00	.69	456.71
1	2	6	1.57	2	2	.10	.00	2.58	24.00	610.77	12.15	.00	3.90	389.02
1	2	7 4G	.88	2	2	.10	.00	2.58	24.00	357.31	12.22	.00	1.00	406.03
1	2	7	2.45	2	2	.10	.00	2.58	24.00	957.37	12.19	.00	2.86	390.76
1	2	8 4H	.03	2	2	.10	.00	2.58	24.00	15.16	11.97	.00	.69	505.25
1	2	8	2.48	2	2	.10	.00	2.58	24.00	958.04	12.20	.00	2.83	386.31
1	2	9 5A	1.77	2	2	.10	.00	2.58	24.00	963.17	12.11	.00	1.11	544.17
1	2	9	4.25	2	2	.10	.00	2.58	24.00	1886.91	12.15	.00	2.12	443.98
1	2	10 5B	.19	2	2	.10	.00	2.58	24.00	68.83	12.08	.00	.70	362.27
1	2	10	4.44	2	2	.10	.00	2.58	24.00	1928.07	12.16	.00	2.06	434.25
1	2	11 5C	.04	2	2	.10	.00	2.58	24.00	19.77	11.97	.00	.69	494.22
1	2	11	4.48	2	2	.10	.00	2.58	24.00	1921.83	12.17	.00	2.04	428.98
1	3	1 4A	.04	2	2	.10	.00	4.05	24.00	48.65	11.96	.00	1.68	1216.27
1	3	2	.04	2	2	.10	.00	4.05	24.00	149.89	11.97	.00	123.32	3747.32
1	3	2 4B	.14	2	2	.10	.00	4.05	24.00	149.86	11.98	.00	1.70	1070.42
1	3	2	.18	2	2	.10	.00	4.05	24.00	299.68	11.98	.00	28.73	1664.90
1	3	3 4C	.94	2	2	.10	.00	4.05	24.00	794.53	12.17	.00	1.92	845.24
1	3	3	1.12	2	2	.10	.00	4.05	24.00	1020.71	12.11	.00	6.23	911.35
1	3	4 4D	.06	2	2	.10	.00	4.05	24.00	71.04	11.96	.00	1.68	1184.00
1	3	4	1.18	2	2	.10	.00	4.05	24.00	1032.49	12.12	.00	6.00	874.99
1	3	4 4E	.35	2	2	.10	.00	4.05	24.00	331.69	12.09	.00	1.85	947.69

2-year 24-hour

10-year 24-hour

1	3	5	1.53	2	2	.10	.00	4.05	24.00	1352.31	12.12	.00	5.05	883.86
1	3	5F	.04	2	2	.10	.00	4.05	24.00	45.10	11.97	.00	1.69	1127.58
1	3	6	1.57	2	2	.10	.00	4.05	24.00	1370.20	12.12	.00	4.96	872.74
1	3	6G	.88	2	2	.10	.00	4.05	24.00	803.07	12.20	.00	2.16	912.57
1	3	7	2.45	2	2	.10	.00	4.05	24.00	2141.86	12.16	.00	3.96	874.23
1	3	8H	.03	2	2	.10	.00	4.05	24.00	36.49	11.96	.00	1.68	1216.27
1	3	8	2.48	2	2	.10	.00	4.05	24.00	2143.89	12.17	.00	3.93	864.47
1	3	9A	1.77	2	2	.10	.00	4.05	24.00	2043.15	12.10	.00	2.33	1154.32
1	3	9	4.25	2	2	.10	.00	4.05	24.00	4135.55	12.13	.00	3.26	973.07
1	3	10B	.19	2	2	.10	.00	4.05	24.00	177.76	12.06	.00	1.70	935.57
1	3	10	4.44	2	2	.10	.00	4.05	24.00	4268.07	12.13	.00	3.19	961.28
1	3	11C	.04	2	2	.10	.00	4.05	24.00	47.85	11.96	.00	1.68	1196.16
1	3	11	4.48	2	2	.10	.00	4.05	24.00	4249.57	12.14	.00	3.18	948.57

Note, These Are Accumulated Discharges At Individual X-[illegible] along the Floodway

SUMMARY TABLE 3

	Q1 (2-year 24-hr)	Q2 (10-year 24-hour)	Q3 (100-year 24-hour)	Q4	Q5	Q6	Q7	Q8	Q9	Q10
	DISCHARGE,CFS									
XSEC/STRUC NO. 1 ALTERNATE 1	3.46	20.21	48.65	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 2 ALTERNATE 1	116.62	182.81	299.68	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 3 ALTERNATE 1	169.97	474.23	1020.71	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 4 ALTERNATE 1	170.86	475.39	1032.49	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 5 ALTERNATE 1	190.09	604.85	1352.31	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 6 ALTERNATE 1	190.84	610.77	1370.20	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 7 ALTERNATE 1	274.51	957.37	2141.86	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 8 ALTERNATE 1	274.76	958.04	2143.89	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 9 ALTERNATE 1	524.13	1886.91	4135.55	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 10 ALTERNATE 1	529.31	1928.07	4268.07	.00	.00	.00	.00	.00	.00	.00
XSEC/STRUC NO. 11 ALTERNATE 1	527.13	1921.83	4249.57	.00	.00	.00	.00	.00	.00	.00

ENDJOB CARD ENCOUNTERED. END OF JOB.

```
END OF  1 JOBS IN THIS RUN

@END
@END IGNORED - IN CONTROL MODE

@FIN
```

```
  RUNID: SCS04M   ACCT: 1604000101     PROJECT: SCS04

***** DISPLAYED LOG ENTRY SECTION *****
  07:30:06        SCS04M FIN

***** RESOURCE UTILIZATION SECTION *****
    RESOURCE                                          AVG
      TIME          CPU          IO          CCER     SIZE   QUALIFIER     FILENAME      PROGRAM     VERSION
  ------------ ------------ ------------ ------------ ----  ------------ ------------ ------------ ------------
  00:00:38.790 00:00:06.074 00:00:07.026 00:00:07.104  59K  SCS76        ABS          TR20         CONVEX
  00:00:00.616 00:00:00.000 00:00:00.351 00:00:05.510   3K  RESOURCES USED IN CONTROL MODE
  ============ ============ ============ ============ ====
  00:00:39.407 00:00:06.074 00:00:07.378 00:00:12.614  46K  SUMMARY

  IMAGES  READ:   55        PAGES:  35

  START:    07:29:56 DEC 22,1983    FIN:  07:30:06 DEC 22,1983

***** COST SECTION *****

  CHARGES BASED ON   BATCH  RUN  AT L PRIORITY
  RT  ($000.68/MIN)   :$000000.44
  CPU ($001.44/MIN)   :$000000.14
  IO  ($000.75/MIN)   :$000000.09
  CCER($001.44/MIN)   :$000000.30
                       ----------

  ESTIMATED TOTAL COST:$000000.97
                       ==========
```