Appendix K-5

Preliminary Hydrology Study for Meridian Park Upper Plateau - Building B

PRELIMINARY HYDROLOGY STUDY

For:

Meridian Park Upper Plateau – Building B

Project Site Location/Address:
SWC Cactus Avenue and Linebacker Drive
Riverside, CA

Prepared For:
Meridian Park LLC
1156 N. Mountain Avenue
Upland, CA 91786
Contact: Timothy Reeves

Lead Agency:
March Joint Powers Authority
14205 Meridian Parkway #140
Riverside, CA 92518

Prepared by:
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Christopher McKee, P.E.

May 5, 2022

Project No. 20-750

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Section I Introduction

The following hydrology study has been prepared for the development of the Meridian Business Center Upper Plateau – Building B project. The project consists of a +/- 1,250,000 sf warehouse building with associated parking and landscape. The site is located south of Cactus Avenue, east of Airman Drive, west of Linebacker Drive and north of Bunker Hills Drive in the County of Riverside, CA within the March Joint Powers Authority jurisdictional area. The project lies within the boundaries of the Upper Plateau portion Meridian South Campus Business Center. The overall project is approximately 23.7 acres. The general location of the site is illustrated on the Vicinity Map (see Appendix A of this report).

Section II Methodology

The hydrologic analysis was completed assuming the ultimate project condition based on conceptual site plans. For both the existing and proposed conditions, the peak storm discharge for the drainage sub areas were calculated using the Riverside County Hydrology Manual. The CivilDesign Riverside County Unit Hydrograph software was used to develop hydrographs for the existing and proposed 2-year 24-Hour storm events (see calculations in Appendix C). A detention analysis was performed using Hydraflow Storm Sewers Software for the proposed storm events (see calculations in appendix D). A soil type of BC was assigned to the project site based on the Riverside County Flood Control and Water Conservation District Hydrology Manual Hydrologic Soils Group Map Plate C-1.16 (see portion of map in Appendix A). In such cases where a dual soil designation has been assigned, the more conservative value is recommended for use. For calculation purposes, a soil type of C was used for the project site. Soil group C is defined as soils having slow infiltration rates when thoroughly wetted and consisting chiefly of silty-loam soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture. These soils have a slow rate of water transmission.

Section III Project Description

Existing Site Conditions

The pre development conditions for the site consist of rough graded land surface flowing to a desilting basin located at the northwest corner of the site. There are no sources of run-on to the site. Stormwater from the basin flows through a 24” riser and 24” RCP lateral connected to the 36” public storm drain under Airman Drive. Stormwater within the storm drain travels north under Airman Drive, west on Cactus Avenue and north on Barton Street. Stormwater outlets at a headwall to the west of Barton Street and stormwater then surface flows to a drain inlet to the east of Barton Street that conveys runoff through a parkway drain to the curb and gutter on Barton Street. Stormwater continues to gutter flow to the north through the existing residential development before heading east on Alessandro Boulevard and entering the first existing catch basin and 18” storm drain lateral per City of Riverside Storm drawing number D-579. After crossing under Alessandro Boulevard flowing to the north and converging with a 33” RCP (D-1000) flowing east, stormwater outlets through a headwall with a 10’x25’ 2.7’ thick rip rap pad into Sycamore Canyon Wilderness Park. The creeks within Sycamore Canyon Wilderness Park combine and flow into Sycamore Damn to the north, and later downstream the Santa Ana River.

Proposed Site Conditions

The proposed development will consist of the construction of 1,250,000 sf warehouse building along with parking, drive aisle and landscaped areas. The site will be divided into three separate watersheds. Each watershed will feature private storm drain lines collecting runoff from the surrounding site that will flow into respective detention basins. Diversion structures that feature a weir with an orifice placed at a calculated height will be installed downstream of each detention system. This design will allow the design capture volume (as calculated per MJPA/Riverside County WQMP requirements) to flow to the Modular Wetland Unit, while allowing higher flows to bypass the MWS unit while the weir and orifice hold back both the 2-year and 100-year storm to existing conditions. Detention System A will feature 3,960 linear feet of 60-inch pipe, Detention System B will feature 5,700 linear feet of 60-inch pipe, and Detention System C will feature 6,000 linear feet of 60-inch pipe. Watershed A and B will continue to flow to the existing 24" lateral serving the detention basin. Based on what is shown on the current conceptual utility plans for the upper plateau buildout, Watershed C will require an additional storm drain connection on Airman Drive to the 24" public storm drain to limit the amount of storm drain pipe on-site.

Section IV Conclusion

The following tables summarize the data and results for the 2-year and 100-year 24-hour design storm in the existing and proposed conditions using the Riverside County Unit Hydrograph. The tables also show the approximate volume within the proposed detention systems that will be detained to meet existing flow rates.

2-YEAR 24-HOUR STORM HYDROGRAPH TABLE

Watershed	Existing Flowrate (cfs)	Proposed Flowrate (cfs)	Volume to be detained (cf)	Flowrate After Detention (cfs)	Notes
A	-	2.440	46,474	0.274	• Diversion Structure A: Weir Height: 3.45' Length: 0.75' 2.40" orifice at invert of weir • Diversion Structure B: Weir Height: 3.80' Length: 2.00' 3.10" orifice at invert of weir • Diversion Structure C: Weir Height: 3.80' Length: 2.20' 3.20" orifice at invert of weir
B	-	4.100	82,292	0.479	
C	-	4.260	85,086	0.508	
TOTAL	1.279	10.80	213,852	1.261	

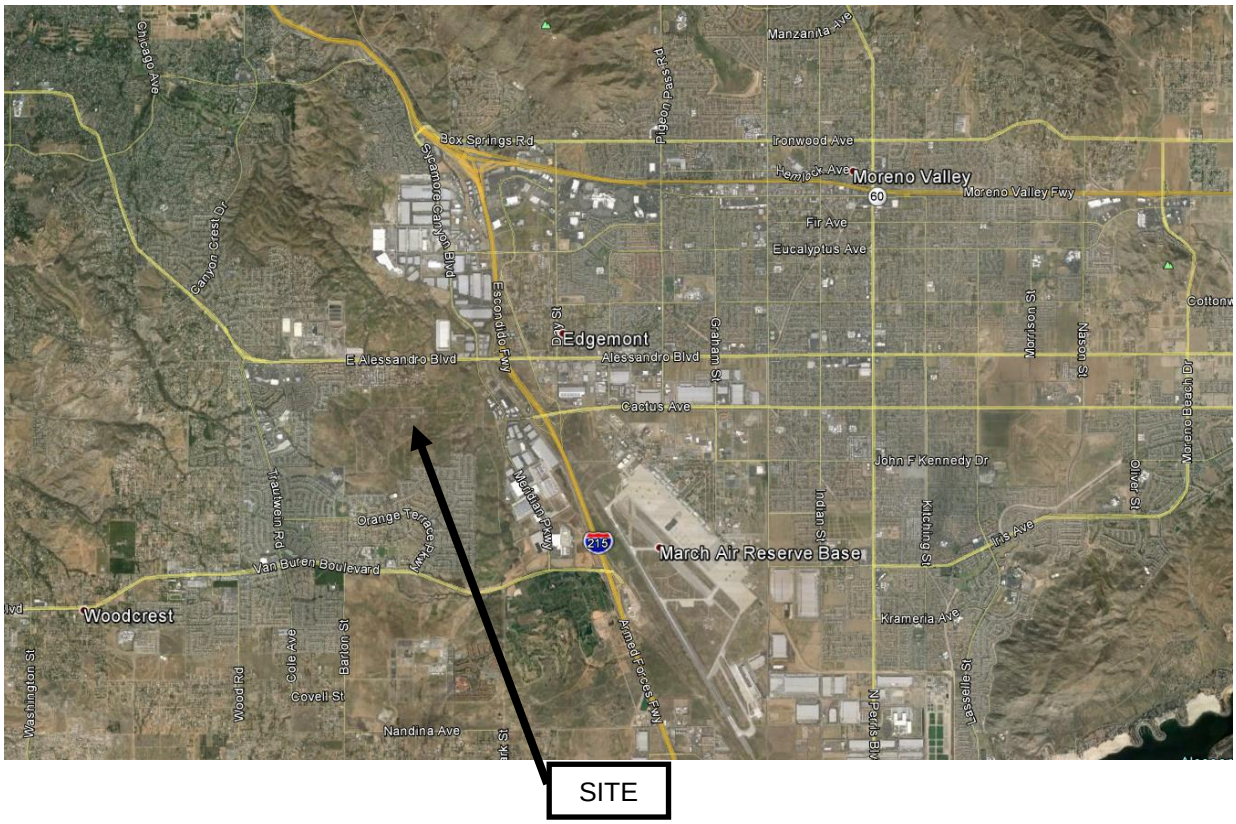
100-YEAR 24-HOUR STORM HYDROGRAPH TABLE

Storm Duration	Existing Flowrate (cfs)	Proposed Flowrate (cfs)	Volume to be detained (cf)	Flowrate After Detention (cfs)	Notes
A	-	6.720	73,478	5.484	• Diversion Structure A: Weir Height: 3.45' Length: 0.75' 2.40" orifice at invert of weir • Diversion Structure B: Weir Height: 3.80' Length: 2.00' 3.10" orifice at invert of weir • Diversion Structure C: Weir Height: 3.80' Length: 2.20' 3.20" orifice at invert of weir
B	-	10.350	109,128	9.393	
C	-	10.760	113,745	9.811	
TOTAL	24.721	27.830	296,351	24.688	

The total proposed flow rate increased from the existing conditions prior to reaching the detention system. Hydraflow Storm Sewers Software used this hydrograph information to generate peak discharge rates for the proposed storm drain system utilizing the proposed detention system. Orifices sizes denoted in the Notes section of the table were placed at the invert of the weir to simulate both the modular wetlands outflow as well as the bypass orifice at the design capture volume height within the detention system. For the 2 year 24 hour storm, utilizing a total volume of 213,852 cf, the proposed flow rate after the detention systems dropped to 1.261 cfs which is lower than the existing flow of 1.279 cfs. For the 100 year 24 hour storm, utilizing a total volume of 296,351 cf, the proposed flow rate after the detention systems dropped to 24.688 cfs which is lower than the existing flow of 24.721 cfs.

APPENDIX A

VICINITY MAP



RAINFALL INTENSITY—INCHES PER HOUR

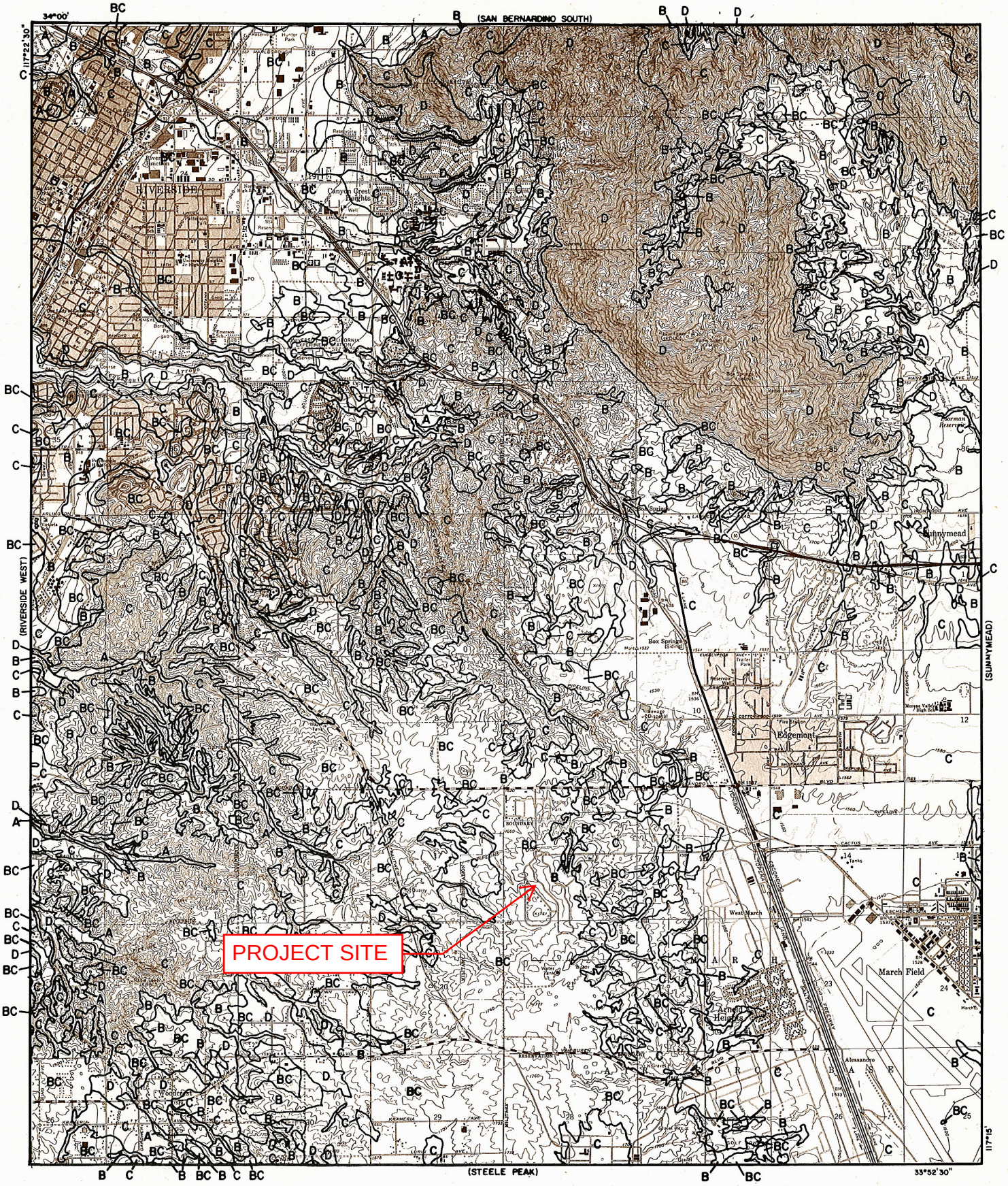
MIRA LOMA			MURRIETA - TEMECULA & RANCHO CALIFORNIA			NORCO			PALM SPRINGS			PERRIS VALLEY		
DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY		DURATION MINUTES	FREQUENCY	
	10 YEAR	100 YEAR		10 YEAR	100 YEAR		10 YEAR	100 YEAR		10 YEAR	100 YEAR		10 YEAR	100 YEAR
5	2.84	4.48	5	3.45	5.10	5	2.77	4.16	5	4.23	6.76	5	2.64	3.78
6	2.58	4.07	6	3.12	4.61	6	2.53	3.79	6	3.80	6.08	6	2.41	3.46
7	2.37	3.75	7	2.87	4.24	7	2.34	3.51	7	3.48	5.56	7	2.24	3.21
8	2.21	3.49	8	2.67	3.94	8	2.19	3.29	8	3.22	5.15	8	2.09	3.01
9	2.08	3.28	9	2.50	3.69	9	2.07	3.10	9	3.01	4.81	9	1.98	2.84
10	1.96	3.10	10	2.36	3.48	10	1.96	2.94	10	2.83	4.52	10	1.88	2.69
11	1.87	2.95	11	2.24	3.30	11	1.87	2.80	11	2.67	4.28	11	1.79	2.57
12	1.78	2.82	12	2.13	3.15	12	1.79	2.68	12	2.54	4.07	12	1.72	2.46
13	1.71	2.70	13	2.04	3.01	13	1.72	2.58	13	2.43	3.88	13	1.65	2.37
14	1.64	2.60	14	1.96	2.89	14	1.66	2.48	14	2.33	3.72	14	1.59	2.29
15	1.58	2.50	15	1.89	2.79	15	1.60	2.40	15	2.23	3.58	15	1.54	2.21
16	1.53	2.42	16	1.82	2.69	16	1.55	2.32	16	2.15	3.44	16	1.49	2.14
17	1.48	2.34	17	1.76	2.60	17	1.50	2.25	17	2.08	3.32	17	1.45	2.08
18	1.44	2.27	18	1.71	2.52	18	1.46	2.19	18	2.01	3.22	18	1.41	2.02
19	1.40	2.21	19	1.66	2.45	19	1.42	2.13	19	1.95	3.12	19	1.37	1.97
20	1.36	2.15	20	1.61	2.38	20	1.39	2.08	20	1.89	3.03	20	1.34	1.92
22	1.29	2.04	22	1.53	2.26	22	1.32	1.98	22	1.79	2.86	22	1.28	1.83
24	1.24	1.95	24	1.46	2.15	24	1.26	1.90	24	1.70	2.72	24	1.22	1.75
26	1.18	1.87	26	1.39	2.06	26	1.22	1.82	26	1.62	2.60	26	1.18	1.69
28	1.14	1.80	28	1.34	1.98	28	1.17	1.76	28	1.56	2.49	28	1.13	1.63
30	1.10	1.73	30	1.29	1.90	30	1.13	1.70	30	1.49	2.39	30	1.10	1.57
32	1.06	1.67	32	1.24	1.84	32	1.10	1.64	32	1.44	2.30	32	1.06	1.52
34	1.03	1.62	34	1.20	1.78	34	1.06	1.59	34	1.39	2.22	34	1.03	1.48
36	1.00	1.57	36	1.17	1.72	36	1.03	1.55	36	1.34	2.15	36	1.00	1.44
38	.97	1.53	38	1.13	1.67	38	1.01	1.51	38	1.30	2.09	38	.98	1.40
40	.94	1.49	40	1.10	1.62	40	.98	1.47	40	1.27	2.02	40	.95	1.37
45	.89	1.40	45	1.03	1.52	45	.92	1.39	45	1.18	1.89	45	.90	1.29
50	.84	1.32	50	.97	1.44	50	.88	1.31	50	1.11	1.78	50	.85	1.22
55	.80	1.26	55	.92	1.36	55	.84	1.25	55	1.05	1.68	55	.81	1.17
60	.76	1.20	60	.88	1.30	60	.80	1.20	60	1.00	1.60	60	.78	1.12
65	.73	1.15	65	.84	1.24	65	.77	1.15	65	.95	1.53	65	.75	1.08
70	.70	1.11	70	.81	1.19	70	.74	1.11	70	.91	1.46	70	.72	1.04
75	.68	1.07	75	.78	1.15	75	.72	1.07	75	.88	1.41	75	.70	1.00
80	.65	1.03	80	.75	1.11	80	.69	1.04	80	.85	1.35	80	.68	.97
85	.63	1.00	85	.73	1.07	85	.67	1.01	85	.82	1.31	85	.66	.94
SLOPE = .530			SLOPE = .550			SLOPE = .500			SLOPE = .580			SLOPE = .490		

RCFC & WCD

HYDROLOGY MANUAL

STANDARD INTENSITY-DURATION CURVES DATA

PLATE D-4.1 (4 of 6)



LEGEND

—— SOILS GROUP BOUNDARY

A SOILS GROUP DESIGNATION

RCFC&WCD

HYDROLOGY MANUAL

N

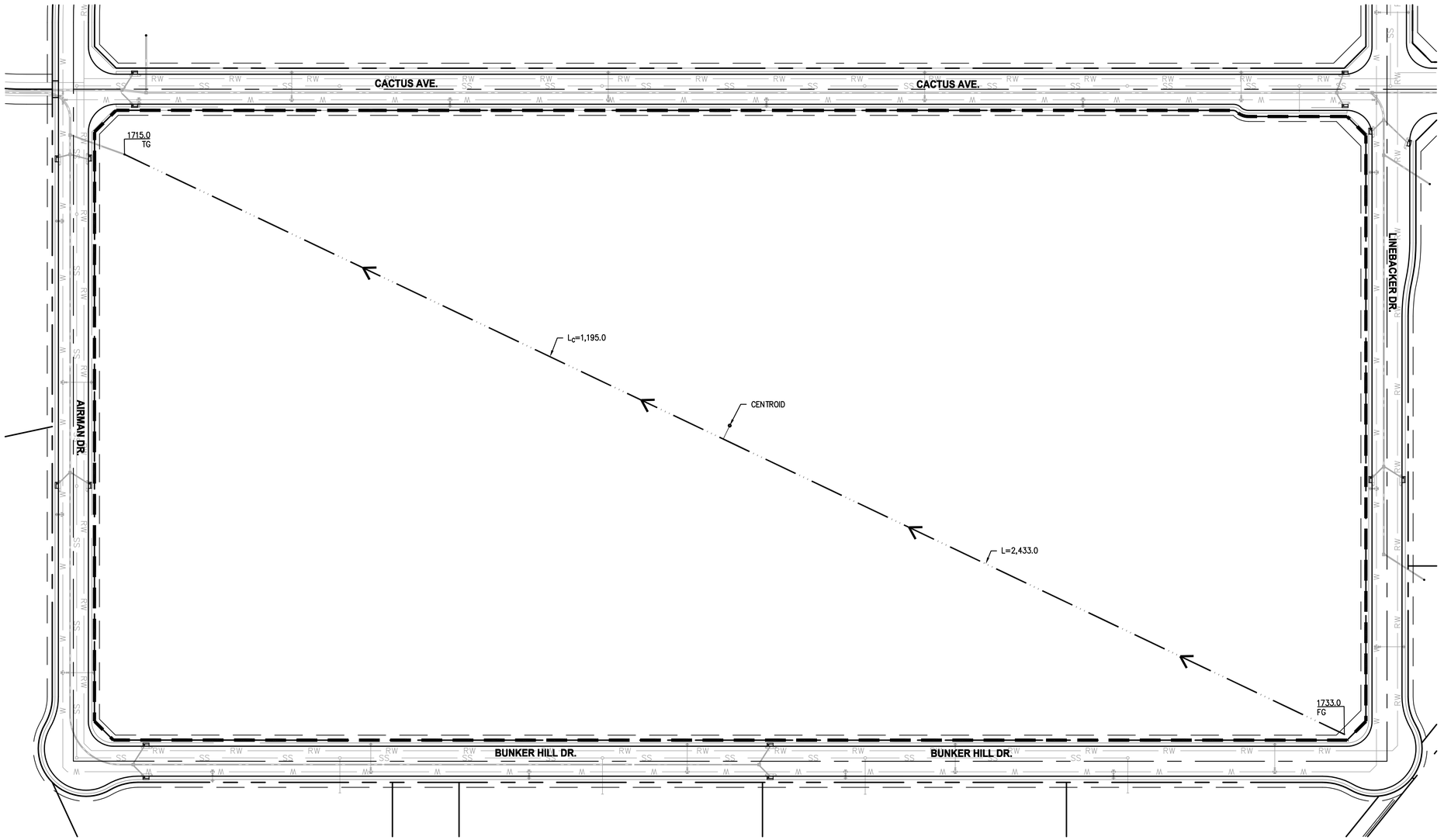
0 FEET 5000

HYDROLOGIC SOILS GROUP MAP FOR RIVERSIDE-EAST

PLATE C-1.16

APPENDIX B

Existing Hydrology Map
Proposed Hydrology Map



LEGEND

FLOW PATH

WATERSHED AREA

SOIL GROUP:	C [PLATE C1.30]
AMC II RUNOFF INDEX NUMBER:	77 [OPEN BRUSH (SOFTWOOD SHRUBS – BUCKWHEAT, SAGE, ETC.)]
IMPERVIOUS PERCENTAGE:	0.0%
LENGTH:	2,433'
LENGTH FROM CENTROID:	1,195'
CHANGE IN ELEVATION:	18.0'
LENGTI:	59.55 ACRES

N

100' 0 100' 200' 300'

GRAPHIC SCALE: 1"=100'

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860

DRC Engineering, Inc.
Civil Engineering/Land Surveying/Land Planning

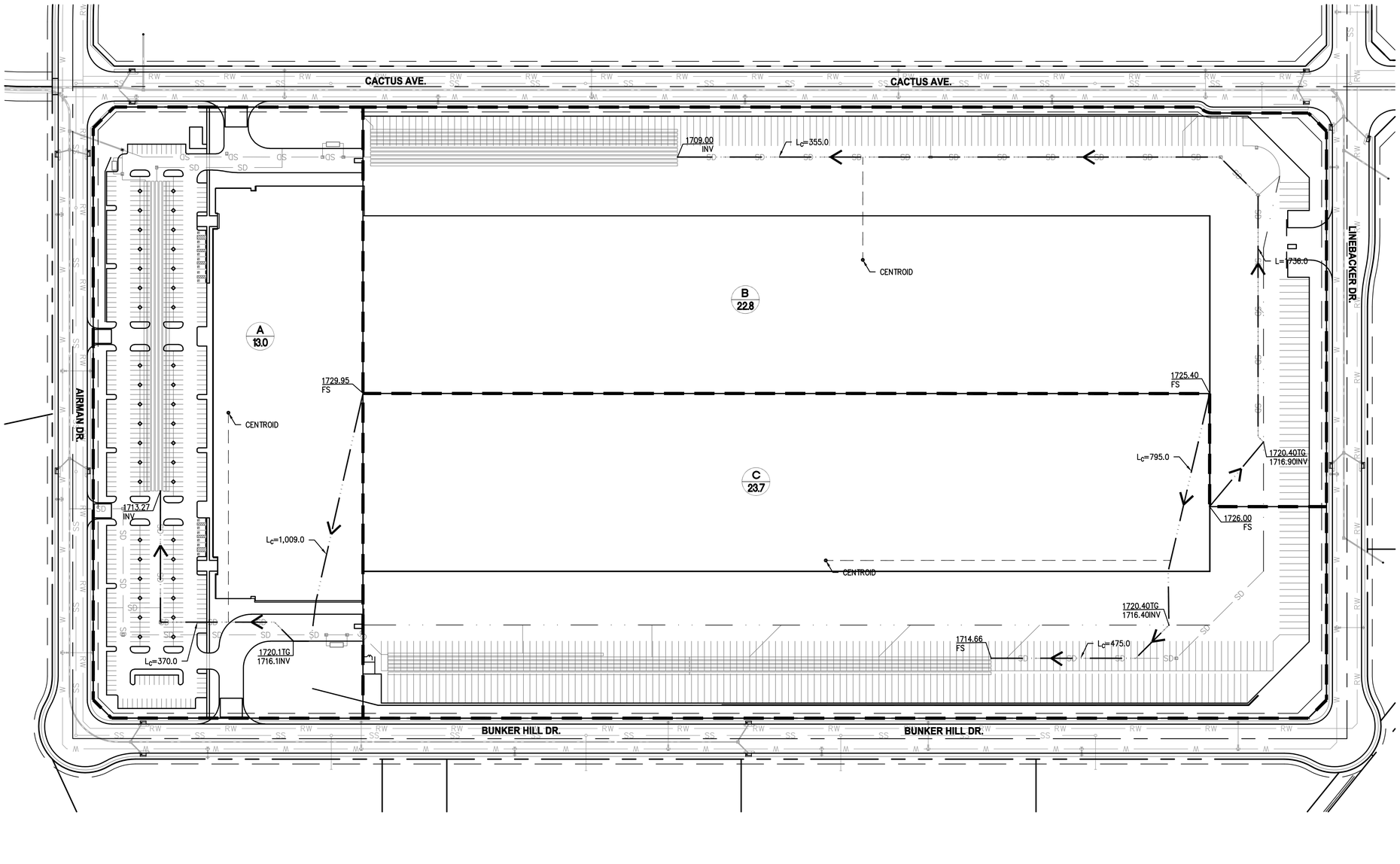
NOT FOR CONSTRUCTION

NO.:	REVISION:	DATE:

PROJECT: MERIDIAN - UPPER PLATEAU
LOT 17 - BUILDING B
COUNTY OF RIVERSIDE, CALIFORNIA

DRAWING NAME: PROPOSED HYDROLOGY MAP

ISSUE:	HYDROLOGY
DATE:	05/06/2022
CHECKED: KH	DRAWN: KH
DRAWING FILE:	
PROJECT NO.:	20-750
SHEET NUMBER:	1 OF 1 SHEETS
SCALE:	AS SHOWN



LEGEND

- FLOW PATH
- WATERSHED AREA
- X — WATERSHED NAME
- XXX — WATERSHED ACREAGE

AREA A

SOIL GROUP:	C [PLATE C1.30]
AMC II RUNOFF INDEX NUMBER:	69 [COMMERCIAL L/S (LAWN, SHRUBS, ETC.)]
IMPERVIOUS PERCENTAGE:	90.0%
LENGTH:	1,009.0'
LENGTH FROM CENTROID:	370'
CHANGE IN ELEVATION:	12.7'
AREA:	13.0 ACRES

AREA B

SOIL GROUP:	C [PLATE C1.30]
AMC II RUNOFF INDEX NUMBER:	69 [COMMERCIAL L/S (LAWN, SHRUBS, ETC.)]
IMPERVIOUS PERCENTAGE:	90.0%
LENGTH:	1,736'
LENGTH FROM CENTROID:	355'
CHANGE IN ELEVATION:	13.5'
AREA:	22.8 ACRES

AREA C

SOIL GROUP:	C [PLATE C1.30]
AMC II RUNOFF INDEX NUMBER:	69 [COMMERCIAL L/S (LAWN, SHRUBS, ETC.)]
IMPERVIOUS PERCENTAGE:	90.0%
LENGTH:	795'
LENGTH FROM CENTROID:	475'
CHANGE IN ELEVATION:	6.8'
AREA:	23.7 ACRES

N

100' 0 100' 200' 300'

GRAPHIC SCALE: 1"=100'

NOT FOR CONSTRUCTION

160 S. Old Springs Road
Suite 210
Anaheim Hills, CA 92808
714-685-6860

Engineering, Inc.
Civil Engineering/Land Surveying/Land Planning

NO.:	REVISION:	DATE:

PROJECT:

MERIDIAN - UPPER PLATEAU
LOT 17 - BUILDING B
COUNTY OF RIVERSIDE, CALIFORNIA

DRAWING NAME:

PROPOSED HYDROLOGY MAP

ISSUE:	HYDROLOGY
DATE:	05/06/2022
CHECKED: KH	DRAWN: KH
DRAWING FILE:	
PROJECT NO.:	20-750
SHEET NUMBER:	1
OF 1	SHEETS
SCALE:	AS SHOWN

APPENDIX C

Existing Condition Hydrograph (Unit Riverside)
Proposed Condition Hydrograph (Unit Riverside)

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750BE242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
Existing
2 year 24 hour

Drainage Area = 59.55(Ac.) = 0.093 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 59.55(Ac.) = 0.093 Sq. Mi.
Length along longest watercourse = 2433.00(Ft.)
Length along longest watercourse measured to centroid = 1195.00(Ft.)
Length along longest watercourse = 0.461 Mi.
Length along longest watercourse measured to centroid = 0.226 Mi.
Difference in elevation = 18.00(Ft.)
Slope along watercourse = 39.0629 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.152 Hr.
Lag time = 9.12 Min.
25% of lag time = 2.28 Min.
40% of lag time = 3.65 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
59.55	1.60	95.28

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
59.55	4.00	238.20

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 1.600(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 1.600(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
59.550	77.00	0.000

Total Area Entered = 59.55(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	59.4	0.476	0.000	0.476	1.000	0.476
					Sum (F) =	0.476

Area averaged mean soil loss (F) (In/Hr) = 0.476
Minimum soil loss rate ((In/Hr)) = 0.238
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	54.826	7.085	4.252
2	0.167	109.653	30.101	18.065
3	0.250	164.479	28.058	16.839
4	0.333	219.305	11.440	6.865
5	0.417	274.132	6.420	3.853
6	0.500	328.958	4.417	2.651
7	0.583	383.785	3.196	1.918
8	0.667	438.611	2.314	1.389
9	0.750	493.437	1.749	1.050
10	0.833	548.264	1.477	0.887
11	0.917	603.090	1.106	0.664
12	1.000	657.916	0.863	0.518
13	1.083	712.743	0.629	0.377
14	1.167	767.569	0.548	0.329
15	1.250	822.395	0.598	0.359
			Sum = 100.000	Sum= 60.015

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.013	(0.844)	0.012	0.001
2	0.17	0.07	0.013	(0.841)	0.012	0.001
3	0.25	0.07	0.013	(0.838)	0.012	0.001
4	0.33	0.10	0.019	(0.834)	0.017	0.002

5	0.42	0.10	0.019	(0.831)	0.017	0.002
6	0.50	0.10	0.019	(0.828)	0.017	0.002
7	0.58	0.10	0.019	(0.825)	0.017	0.002
8	0.67	0.10	0.019	(0.821)	0.017	0.002
9	0.75	0.10	0.019	(0.818)	0.017	0.002
10	0.83	0.13	0.026	(0.815)	0.023	0.003
11	0.92	0.13	0.026	(0.812)	0.023	0.003
12	1.00	0.13	0.026	(0.808)	0.023	0.003
13	1.08	0.10	0.019	(0.805)	0.017	0.002
14	1.17	0.10	0.019	(0.802)	0.017	0.002
15	1.25	0.10	0.019	(0.799)	0.017	0.002
16	1.33	0.10	0.019	(0.796)	0.017	0.002
17	1.42	0.10	0.019	(0.793)	0.017	0.002
18	1.50	0.10	0.019	(0.789)	0.017	0.002
19	1.58	0.10	0.019	(0.786)	0.017	0.002
20	1.67	0.10	0.019	(0.783)	0.017	0.002
21	1.75	0.10	0.019	(0.780)	0.017	0.002
22	1.83	0.13	0.026	(0.777)	0.023	0.003
23	1.92	0.13	0.026	(0.774)	0.023	0.003
24	2.00	0.13	0.026	(0.771)	0.023	0.003
25	2.08	0.13	0.026	(0.767)	0.023	0.003
26	2.17	0.13	0.026	(0.764)	0.023	0.003
27	2.25	0.13	0.026	(0.761)	0.023	0.003
28	2.33	0.13	0.026	(0.758)	0.023	0.003
29	2.42	0.13	0.026	(0.755)	0.023	0.003
30	2.50	0.13	0.026	(0.752)	0.023	0.003
31	2.58	0.17	0.032	(0.749)	0.029	0.003
32	2.67	0.17	0.032	(0.746)	0.029	0.003
33	2.75	0.17	0.032	(0.743)	0.029	0.003
34	2.83	0.17	0.032	(0.740)	0.029	0.003
35	2.92	0.17	0.032	(0.737)	0.029	0.003
36	3.00	0.17	0.032	(0.734)	0.029	0.003
37	3.08	0.17	0.032	(0.731)	0.029	0.003
38	3.17	0.17	0.032	(0.728)	0.029	0.003
39	3.25	0.17	0.032	(0.724)	0.029	0.003
40	3.33	0.17	0.032	(0.721)	0.029	0.003
41	3.42	0.17	0.032	(0.718)	0.029	0.003
42	3.50	0.17	0.032	(0.715)	0.029	0.003
43	3.58	0.17	0.032	(0.712)	0.029	0.003
44	3.67	0.17	0.032	(0.709)	0.029	0.003
45	3.75	0.17	0.032	(0.706)	0.029	0.003
46	3.83	0.20	0.038	(0.704)	0.035	0.004
47	3.92	0.20	0.038	(0.701)	0.035	0.004
48	4.00	0.20	0.038	(0.698)	0.035	0.004
49	4.08	0.20	0.038	(0.695)	0.035	0.004
50	4.17	0.20	0.038	(0.692)	0.035	0.004
51	4.25	0.20	0.038	(0.689)	0.035	0.004
52	4.33	0.23	0.045	(0.686)	0.040	0.004
53	4.42	0.23	0.045	(0.683)	0.040	0.004
54	4.50	0.23	0.045	(0.680)	0.040	0.004
55	4.58	0.23	0.045	(0.677)	0.040	0.004
56	4.67	0.23	0.045	(0.674)	0.040	0.004
57	4.75	0.23	0.045	(0.671)	0.040	0.004
58	4.83	0.27	0.051	(0.668)	0.046	0.005
59	4.92	0.27	0.051	(0.665)	0.046	0.005
60	5.00	0.27	0.051	(0.663)	0.046	0.005
61	5.08	0.20	0.038	(0.660)	0.035	0.004
62	5.17	0.20	0.038	(0.657)	0.035	0.004
63	5.25	0.20	0.038	(0.654)	0.035	0.004
64	5.33	0.23	0.045	(0.651)	0.040	0.004

65	5.42	0.23	0.045	(0.648)	0.040	0.004
66	5.50	0.23	0.045	(0.645)	0.040	0.004
67	5.58	0.27	0.051	(0.643)	0.046	0.005
68	5.67	0.27	0.051	(0.640)	0.046	0.005
69	5.75	0.27	0.051	(0.637)	0.046	0.005
70	5.83	0.27	0.051	(0.634)	0.046	0.005
71	5.92	0.27	0.051	(0.631)	0.046	0.005
72	6.00	0.27	0.051	(0.628)	0.046	0.005
73	6.08	0.30	0.058	(0.626)	0.052	0.006
74	6.17	0.30	0.058	(0.623)	0.052	0.006
75	6.25	0.30	0.058	(0.620)	0.052	0.006
76	6.33	0.30	0.058	(0.617)	0.052	0.006
77	6.42	0.30	0.058	(0.615)	0.052	0.006
78	6.50	0.30	0.058	(0.612)	0.052	0.006
79	6.58	0.33	0.064	(0.609)	0.058	0.006
80	6.67	0.33	0.064	(0.606)	0.058	0.006
81	6.75	0.33	0.064	(0.604)	0.058	0.006
82	6.83	0.33	0.064	(0.601)	0.058	0.006
83	6.92	0.33	0.064	(0.598)	0.058	0.006
84	7.00	0.33	0.064	(0.595)	0.058	0.006
85	7.08	0.33	0.064	(0.593)	0.058	0.006
86	7.17	0.33	0.064	(0.590)	0.058	0.006
87	7.25	0.33	0.064	(0.587)	0.058	0.006
88	7.33	0.37	0.070	(0.585)	0.063	0.007
89	7.42	0.37	0.070	(0.582)	0.063	0.007
90	7.50	0.37	0.070	(0.579)	0.063	0.007
91	7.58	0.40	0.077	(0.577)	0.069	0.008
92	7.67	0.40	0.077	(0.574)	0.069	0.008
93	7.75	0.40	0.077	(0.571)	0.069	0.008
94	7.83	0.43	0.083	(0.569)	0.075	0.008
95	7.92	0.43	0.083	(0.566)	0.075	0.008
96	8.00	0.43	0.083	(0.563)	0.075	0.008
97	8.08	0.50	0.096	(0.561)	0.086	0.010
98	8.17	0.50	0.096	(0.558)	0.086	0.010
99	8.25	0.50	0.096	(0.556)	0.086	0.010
100	8.33	0.50	0.096	(0.553)	0.086	0.010
101	8.42	0.50	0.096	(0.550)	0.086	0.010
102	8.50	0.50	0.096	(0.548)	0.086	0.010
103	8.58	0.53	0.102	(0.545)	0.092	0.010
104	8.67	0.53	0.102	(0.543)	0.092	0.010
105	8.75	0.53	0.102	(0.540)	0.092	0.010
106	8.83	0.57	0.109	(0.538)	0.098	0.011
107	8.92	0.57	0.109	(0.535)	0.098	0.011
108	9.00	0.57	0.109	(0.533)	0.098	0.011
109	9.08	0.63	0.122	(0.530)	0.109	0.012
110	9.17	0.63	0.122	(0.528)	0.109	0.012
111	9.25	0.63	0.122	(0.525)	0.109	0.012
112	9.33	0.67	0.128	(0.523)	0.115	0.013
113	9.42	0.67	0.128	(0.520)	0.115	0.013
114	9.50	0.67	0.128	(0.518)	0.115	0.013
115	9.58	0.70	0.134	(0.515)	0.121	0.013
116	9.67	0.70	0.134	(0.513)	0.121	0.013
117	9.75	0.70	0.134	(0.510)	0.121	0.013
118	9.83	0.73	0.141	(0.508)	0.127	0.014
119	9.92	0.73	0.141	(0.505)	0.127	0.014
120	10.00	0.73	0.141	(0.503)	0.127	0.014
121	10.08	0.50	0.096	(0.500)	0.086	0.010
122	10.17	0.50	0.096	(0.498)	0.086	0.010
123	10.25	0.50	0.096	(0.496)	0.086	0.010
124	10.33	0.50	0.096	(0.493)	0.086	0.010

125	10.42	0.50	0.096	(0.491)	0.086	0.010
126	10.50	0.50	0.096	(0.488)	0.086	0.010
127	10.58	0.67	0.128	(0.486)	0.115	0.013
128	10.67	0.67	0.128	(0.484)	0.115	0.013
129	10.75	0.67	0.128	(0.481)	0.115	0.013
130	10.83	0.67	0.128	(0.479)	0.115	0.013
131	10.92	0.67	0.128	(0.476)	0.115	0.013
132	11.00	0.67	0.128	(0.474)	0.115	0.013
133	11.08	0.63	0.122	(0.472)	0.109	0.012
134	11.17	0.63	0.122	(0.469)	0.109	0.012
135	11.25	0.63	0.122	(0.467)	0.109	0.012
136	11.33	0.63	0.122	(0.465)	0.109	0.012
137	11.42	0.63	0.122	(0.463)	0.109	0.012
138	11.50	0.63	0.122	(0.460)	0.109	0.012
139	11.58	0.57	0.109	(0.458)	0.098	0.011
140	11.67	0.57	0.109	(0.456)	0.098	0.011
141	11.75	0.57	0.109	(0.453)	0.098	0.011
142	11.83	0.60	0.115	(0.451)	0.104	0.012
143	11.92	0.60	0.115	(0.449)	0.104	0.012
144	12.00	0.60	0.115	(0.447)	0.104	0.012
145	12.08	0.83	0.160	(0.444)	0.144	0.016
146	12.17	0.83	0.160	(0.442)	0.144	0.016
147	12.25	0.83	0.160	(0.440)	0.144	0.016
148	12.33	0.87	0.166	(0.438)	0.150	0.017
149	12.42	0.87	0.166	(0.436)	0.150	0.017
150	12.50	0.87	0.166	(0.433)	0.150	0.017
151	12.58	0.93	0.179	(0.431)	0.161	0.018
152	12.67	0.93	0.179	(0.429)	0.161	0.018
153	12.75	0.93	0.179	(0.427)	0.161	0.018
154	12.83	0.97	0.186	(0.425)	0.167	0.019
155	12.92	0.97	0.186	(0.423)	0.167	0.019
156	13.00	0.97	0.186	(0.420)	0.167	0.019
157	13.08	1.13	0.218	(0.418)	0.196	0.022
158	13.17	1.13	0.218	(0.416)	0.196	0.022
159	13.25	1.13	0.218	(0.414)	0.196	0.022
160	13.33	1.13	0.218	(0.412)	0.196	0.022
161	13.42	1.13	0.218	(0.410)	0.196	0.022
162	13.50	1.13	0.218	(0.408)	0.196	0.022
163	13.58	0.77	0.147	(0.406)	0.132	0.015
164	13.67	0.77	0.147	(0.404)	0.132	0.015
165	13.75	0.77	0.147	(0.402)	0.132	0.015
166	13.83	0.77	0.147	(0.400)	0.132	0.015
167	13.92	0.77	0.147	(0.398)	0.132	0.015
168	14.00	0.77	0.147	(0.395)	0.132	0.015
169	14.08	0.90	0.173	(0.393)	0.156	0.017
170	14.17	0.90	0.173	(0.391)	0.156	0.017
171	14.25	0.90	0.173	(0.389)	0.156	0.017
172	14.33	0.87	0.166	(0.387)	0.150	0.017
173	14.42	0.87	0.166	(0.385)	0.150	0.017
174	14.50	0.87	0.166	(0.384)	0.150	0.017
175	14.58	0.87	0.166	(0.382)	0.150	0.017
176	14.67	0.87	0.166	(0.380)	0.150	0.017
177	14.75	0.87	0.166	(0.378)	0.150	0.017
178	14.83	0.83	0.160	(0.376)	0.144	0.016
179	14.92	0.83	0.160	(0.374)	0.144	0.016
180	15.00	0.83	0.160	(0.372)	0.144	0.016
181	15.08	0.80	0.154	(0.370)	0.138	0.015
182	15.17	0.80	0.154	(0.368)	0.138	0.015
183	15.25	0.80	0.154	(0.366)	0.138	0.015
184	15.33	0.77	0.147	(0.364)	0.132	0.015

185	15.42	0.77	0.147	(0.362)	0.132	0.015
186	15.50	0.77	0.147	(0.361)	0.132	0.015
187	15.58	0.63	0.122	(0.359)	0.109	0.012
188	15.67	0.63	0.122	(0.357)	0.109	0.012
189	15.75	0.63	0.122	(0.355)	0.109	0.012
190	15.83	0.63	0.122	(0.353)	0.109	0.012
191	15.92	0.63	0.122	(0.351)	0.109	0.012
192	16.00	0.63	0.122	(0.350)	0.109	0.012
193	16.08	0.13	0.026	(0.348)	0.023	0.003
194	16.17	0.13	0.026	(0.346)	0.023	0.003
195	16.25	0.13	0.026	(0.344)	0.023	0.003
196	16.33	0.13	0.026	(0.343)	0.023	0.003
197	16.42	0.13	0.026	(0.341)	0.023	0.003
198	16.50	0.13	0.026	(0.339)	0.023	0.003
199	16.58	0.10	0.019	(0.337)	0.017	0.002
200	16.67	0.10	0.019	(0.336)	0.017	0.002
201	16.75	0.10	0.019	(0.334)	0.017	0.002
202	16.83	0.10	0.019	(0.332)	0.017	0.002
203	16.92	0.10	0.019	(0.331)	0.017	0.002
204	17.00	0.10	0.019	(0.329)	0.017	0.002
205	17.08	0.17	0.032	(0.327)	0.029	0.003
206	17.17	0.17	0.032	(0.326)	0.029	0.003
207	17.25	0.17	0.032	(0.324)	0.029	0.003
208	17.33	0.17	0.032	(0.322)	0.029	0.003
209	17.42	0.17	0.032	(0.321)	0.029	0.003
210	17.50	0.17	0.032	(0.319)	0.029	0.003
211	17.58	0.17	0.032	(0.317)	0.029	0.003
212	17.67	0.17	0.032	(0.316)	0.029	0.003
213	17.75	0.17	0.032	(0.314)	0.029	0.003
214	17.83	0.13	0.026	(0.313)	0.023	0.003
215	17.92	0.13	0.026	(0.311)	0.023	0.003
216	18.00	0.13	0.026	(0.310)	0.023	0.003
217	18.08	0.13	0.026	(0.308)	0.023	0.003
218	18.17	0.13	0.026	(0.307)	0.023	0.003
219	18.25	0.13	0.026	(0.305)	0.023	0.003
220	18.33	0.13	0.026	(0.304)	0.023	0.003
221	18.42	0.13	0.026	(0.302)	0.023	0.003
222	18.50	0.13	0.026	(0.301)	0.023	0.003
223	18.58	0.10	0.019	(0.299)	0.017	0.002
224	18.67	0.10	0.019	(0.298)	0.017	0.002
225	18.75	0.10	0.019	(0.296)	0.017	0.002
226	18.83	0.07	0.013	(0.295)	0.012	0.001
227	18.92	0.07	0.013	(0.294)	0.012	0.001
228	19.00	0.07	0.013	(0.292)	0.012	0.001
229	19.08	0.10	0.019	(0.291)	0.017	0.002
230	19.17	0.10	0.019	(0.289)	0.017	0.002
231	19.25	0.10	0.019	(0.288)	0.017	0.002
232	19.33	0.13	0.026	(0.287)	0.023	0.003
233	19.42	0.13	0.026	(0.285)	0.023	0.003
234	19.50	0.13	0.026	(0.284)	0.023	0.003
235	19.58	0.10	0.019	(0.283)	0.017	0.002
236	19.67	0.10	0.019	(0.281)	0.017	0.002
237	19.75	0.10	0.019	(0.280)	0.017	0.002
238	19.83	0.07	0.013	(0.279)	0.012	0.001
239	19.92	0.07	0.013	(0.278)	0.012	0.001
240	20.00	0.07	0.013	(0.276)	0.012	0.001
241	20.08	0.10	0.019	(0.275)	0.017	0.002
242	20.17	0.10	0.019	(0.274)	0.017	0.002
243	20.25	0.10	0.019	(0.273)	0.017	0.002
244	20.33	0.10	0.019	(0.272)	0.017	0.002

245	20.42	0.10	0.019	(0.271)	0.017	0.002
246	20.50	0.10	0.019	(0.269)	0.017	0.002
247	20.58	0.10	0.019	(0.268)	0.017	0.002
248	20.67	0.10	0.019	(0.267)	0.017	0.002
249	20.75	0.10	0.019	(0.266)	0.017	0.002
250	20.83	0.07	0.013	(0.265)	0.012	0.001
251	20.92	0.07	0.013	(0.264)	0.012	0.001
252	21.00	0.07	0.013	(0.263)	0.012	0.001
253	21.08	0.10	0.019	(0.262)	0.017	0.002
254	21.17	0.10	0.019	(0.261)	0.017	0.002
255	21.25	0.10	0.019	(0.260)	0.017	0.002
256	21.33	0.07	0.013	(0.259)	0.012	0.001
257	21.42	0.07	0.013	(0.258)	0.012	0.001
258	21.50	0.07	0.013	(0.257)	0.012	0.001
259	21.58	0.10	0.019	(0.256)	0.017	0.002
260	21.67	0.10	0.019	(0.255)	0.017	0.002
261	21.75	0.10	0.019	(0.254)	0.017	0.002
262	21.83	0.07	0.013	(0.253)	0.012	0.001
263	21.92	0.07	0.013	(0.252)	0.012	0.001
264	22.00	0.07	0.013	(0.251)	0.012	0.001
265	22.08	0.10	0.019	(0.251)	0.017	0.002
266	22.17	0.10	0.019	(0.250)	0.017	0.002
267	22.25	0.10	0.019	(0.249)	0.017	0.002
268	22.33	0.07	0.013	(0.248)	0.012	0.001
269	22.42	0.07	0.013	(0.247)	0.012	0.001
270	22.50	0.07	0.013	(0.247)	0.012	0.001
271	22.58	0.07	0.013	(0.246)	0.012	0.001
272	22.67	0.07	0.013	(0.245)	0.012	0.001
273	22.75	0.07	0.013	(0.245)	0.012	0.001
274	22.83	0.07	0.013	(0.244)	0.012	0.001
275	22.92	0.07	0.013	(0.243)	0.012	0.001
276	23.00	0.07	0.013	(0.243)	0.012	0.001
277	23.08	0.07	0.013	(0.242)	0.012	0.001
278	23.17	0.07	0.013	(0.242)	0.012	0.001
279	23.25	0.07	0.013	(0.241)	0.012	0.001
280	23.33	0.07	0.013	(0.241)	0.012	0.001
281	23.42	0.07	0.013	(0.240)	0.012	0.001
282	23.50	0.07	0.013	(0.240)	0.012	0.001
283	23.58	0.07	0.013	(0.239)	0.012	0.001
284	23.67	0.07	0.013	(0.239)	0.012	0.001
285	23.75	0.07	0.013	(0.239)	0.012	0.001
286	23.83	0.07	0.013	(0.238)	0.012	0.001
287	23.92	0.07	0.013	(0.238)	0.012	0.001
288	24.00	0.07	0.013	(0.238)	0.012	0.001

(Loss Rate Not Used)

Sum = 100.0 Sum = 1.9

Flood volume = Effective rainfall 0.16(In)
times area 59.5(Ac.)/[(In)/(Ft.)] = 0.8(Ac.Ft)
Total soil loss = 1.44(In)
Total soil loss = 7.145(Ac.Ft)
Total rainfall = 1.60(In)
Flood volume = 34582.6 Cubic Feet
Total soil loss = 311243.6 Cubic Feet

Peak flow rate of this hydrograph = 1.279(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0000	0.01	Q				
0+10	0.0002	0.03	Q				
0+15	0.0006	0.05	Q				
0+20	0.0010	0.06	Q				
0+25	0.0015	0.08	Q				
0+30	0.0022	0.09	Q				
0+35	0.0029	0.10	Q				
0+40	0.0036	0.10	Q				
0+45	0.0043	0.11	Q				
0+50	0.0051	0.11	Q				
0+55	0.0059	0.12	Q				
1+ 0	0.0069	0.14	Q				
1+ 5	0.0078	0.14	Q				
1+10	0.0087	0.13	Q				
1+15	0.0096	0.12	Q				
1+20	0.0104	0.12	Q				
1+25	0.0112	0.12	Q				
1+30	0.0121	0.12	Q				
1+35	0.0129	0.12	Q				
1+40	0.0137	0.12	Q				
1+45	0.0145	0.12	Q				
1+50	0.0153	0.12	Q				
1+55	0.0162	0.13	Q				
2+ 0	0.0172	0.14	Q				
2+ 5	0.0182	0.15	Q				
2+10	0.0192	0.15	Q				
2+15	0.0202	0.15	QV				
2+20	0.0212	0.15	QV				
2+25	0.0223	0.15	QV				
2+30	0.0233	0.15	QV				
2+35	0.0244	0.15	QV				
2+40	0.0255	0.17	QV				
2+45	0.0268	0.18	QV				
2+50	0.0280	0.18	QV				
2+55	0.0293	0.19	QV				
3+ 0	0.0306	0.19	QV				
3+ 5	0.0319	0.19	QV				
3+10	0.0332	0.19	QV				
3+15	0.0345	0.19	QV				
3+20	0.0358	0.19	QV				
3+25	0.0371	0.19	QV				
3+30	0.0384	0.19	QV				
3+35	0.0398	0.19	Q V				
3+40	0.0411	0.19	Q V				
3+45	0.0424	0.19	Q V				
3+50	0.0438	0.19	Q V				
3+55	0.0452	0.21	Q V				
4+ 0	0.0467	0.22	Q V				
4+ 5	0.0482	0.22	Q V				
4+10	0.0497	0.22	Q V				
4+15	0.0513	0.23	Q V				
4+20	0.0529	0.23	Q V				
4+25	0.0545	0.24	Q V				
4+30	0.0563	0.25	|QV				
4+35	0.0581	0.26	|QV				

4+40	0.0599	0.26	|Q V	|	|	|	|
4+45	0.0617	0.26	|Q V	|	|	|	|
4+50	0.0635	0.27	|Q V	|	|	|	|
4+55	0.0655	0.28	|Q V	|	|	|	|
5+ 0	0.0675	0.29	|Q V	|	|	|	|
5+ 5	0.0695	0.29	|Q V	|	|	|	|
5+10	0.0714	0.27	|Q V	|	|	|	|
5+15	0.0731	0.25	|Q V	|	|	|	|
5+20	0.0748	0.25	Q V	|	|	|	|
5+25	0.0765	0.25	|Q V	|	|	|	|
5+30	0.0784	0.26	|Q V	|	|	|	|
5+35	0.0802	0.27	|Q V	|	|	|	|
5+40	0.0821	0.28	|Q V	|	|	|	|
5+45	0.0842	0.29	|Q V	|	|	|	|
5+50	0.0862	0.30	|Q V	|	|	|	|
5+55	0.0883	0.30	|Q V	|	|	|	|
6+ 0	0.0904	0.30	|Q V	|	|	|	|
6+ 5	0.0925	0.31	|Q V	|	|	|	|
6+10	0.0947	0.32	|Q V	|	|	|	|
6+15	0.0969	0.33	|Q V	|	|	|	|
6+20	0.0992	0.33	|Q V	|	|	|	|
6+25	0.1016	0.34	|Q V	|	|	|	|
6+30	0.1039	0.34	|Q V	|	|	|	|
6+35	0.1063	0.34	|Q V	|	|	|	|
6+40	0.1087	0.36	|Q V	|	|	|	|
6+45	0.1113	0.37	|Q V	|	|	|	|
6+50	0.1138	0.37	|Q V	|	|	|	|
6+55	0.1164	0.38	|Q V	|	|	|	|
7+ 0	0.1191	0.38	|Q V	|	|	|	|
7+ 5	0.1217	0.38	|Q V	|	|	|	|
7+10	0.1243	0.38	|Q V	|	|	|	|
7+15	0.1269	0.38	|Q V	|	|	|	|
7+20	0.1296	0.39	|Q V	|	|	|	|
7+25	0.1323	0.40	|Q V	|	|	|	|
7+30	0.1351	0.41	|Q V	|	|	|	|
7+35	0.1380	0.42	|Q V	|	|	|	|
7+40	0.1410	0.43	|Q V	|	|	|	|
7+45	0.1440	0.44	|Q V	|	|	|	|
7+50	0.1471	0.45	|Q V	|	|	|	|
7+55	0.1503	0.47	|Q V	|	|	|	|
8+ 0	0.1536	0.48	|Q V	|	|	|	|
8+ 5	0.1570	0.49	|Q V	|	|	|	|
8+10	0.1606	0.52	| Q V	|	|	|	|
8+15	0.1643	0.54	| Q V	|	|	|	|
8+20	0.1681	0.55	| Q V	|	|	|	|
8+25	0.1720	0.56	| Q V	|	|	|	|
8+30	0.1759	0.56	| Q V	|	|	|	|
8+35	0.1798	0.57	| Q V|	|	|	|	|
8+40	0.1838	0.58	| Q V|	|	|	|	|
8+45	0.1879	0.60	| Q V|	|	|	|	|
8+50	0.1921	0.61	| Q V|	|	|	|	|
8+55	0.1964	0.62	| Q V|	|	|	|	|
9+ 0	0.2007	0.63	| Q V	|	|	|	|
9+ 5	0.2052	0.65	| Q V	|	|	|	|
9+10	0.2098	0.67	| Q V	|	|	|	|
9+15	0.2146	0.70	| Q V	|	|	|	|
9+20	0.2195	0.71	| Q |V	|	|	|	|
9+25	0.2245	0.73	| Q |V	|	|	|	|
9+30	0.2296	0.74	| Q |V	|	|	|	|
9+35	0.2348	0.75	| Q |V	|	|	|	|

9+40	0.2401	0.77	Q	V			
9+45	0.2455	0.78	Q	V			
9+50	0.2510	0.79	Q	V			
9+55	0.2565	0.81	Q	V			
10+ 0	0.2622	0.82	Q	V			
10+ 5	0.2678	0.81	Q	V			
10+10	0.2729	0.73	Q	V			
10+15	0.2774	0.66	Q	V			
10+20	0.2818	0.63	Q	V			
10+25	0.2861	0.62	Q	V			
10+30	0.2902	0.61	Q	V			
10+35	0.2945	0.61	Q	V			
10+40	0.2990	0.67	Q	V			
10+45	0.3040	0.72	Q	V			
10+50	0.3090	0.73	Q	V			
10+55	0.3141	0.74	Q	V			
11+ 0	0.3193	0.75	Q	V			
11+ 5	0.3245	0.75	Q	V			
11+10	0.3296	0.74	Q	V			
11+15	0.3346	0.73	Q	V			
11+20	0.3397	0.73	Q	V			
11+25	0.3447	0.73	Q	V			
11+30	0.3497	0.73	Q	V			
11+35	0.3547	0.73	Q	V			
11+40	0.3596	0.70	Q	V			
11+45	0.3643	0.68	Q	V			
11+50	0.3689	0.68	Q	V			
11+55	0.3736	0.68	Q	V			
12+ 0	0.3784	0.69	Q	V			
12+ 5	0.3833	0.71	Q	V			
12+10	0.3887	0.79	Q	V			
12+15	0.3947	0.87	Q	V			
12+20	0.4009	0.90	Q	V			
12+25	0.4073	0.93	Q	V			
12+30	0.4138	0.95	Q	V			
12+35	0.4205	0.97	Q	V			
12+40	0.4274	1.00	Q	V			
12+45	0.4345	1.03	Q	V			
12+50	0.4417	1.05	Q	V			
12+55	0.4490	1.07	Q	V			
13+ 0	0.4565	1.08	Q	V			
13+ 5	0.4641	1.11	Q	V			
13+10	0.4722	1.17	Q	V			
13+15	0.4807	1.23	Q	V			
13+20	0.4893	1.25	Q	V			
13+25	0.4981	1.27	Q	V			
13+30	0.5069	1.28	Q	V			
13+35	0.5155	1.26	Q	V			
13+40	0.5233	1.13	Q	V			
13+45	0.5304	1.02	Q	V			
13+50	0.5371	0.97	Q	V			
13+55	0.5436	0.95	Q	V			
14+ 0	0.5500	0.93	Q	V			
14+ 5	0.5565	0.93	Q	V			
14+10	0.5631	0.97	Q	V			
14+15	0.5701	1.01	Q	V			
14+20	0.5771	1.01	Q	V			
14+25	0.5840	1.01	Q	V			
14+30	0.5909	1.00	Q	V			
14+35	0.5978	1.00	Q	V			

14+40	0.6046	1.00	| Q	|	|	V |
14+45	0.6115	1.00	| Q	|	|	V |
14+50	0.6183	0.99	| Q	|	|	|V |
14+55	0.6251	0.98	| Q	|	|	|V |
15+ 0	0.6318	0.97	| Q	|	|	|V |
15+ 5	0.6385	0.97	| Q	|	|	| V |
15+10	0.6450	0.95	| Q	|	|	| V |
15+15	0.6515	0.94	| Q	|	|	| V |
15+20	0.6579	0.93	| Q	|	|	| V |
15+25	0.6643	0.92	| Q	|	|	| V |
15+30	0.6705	0.90	| Q	|	|	| V |
15+35	0.6766	0.89	| Q	|	|	| V |
15+40	0.6824	0.84	| Q	|	|	| V |
15+45	0.6878	0.79	| Q	|	|	| V |
15+50	0.6931	0.77	| Q	|	|	| V |
15+55	0.6983	0.76	| Q	|	|	| V |
16+ 0	0.7035	0.75	| Q	|	|	| V |
16+ 5	0.7084	0.71	| Q	|	|	| V |
16+10	0.7120	0.53	| Q	|	|	| V |
16+15	0.7145	0.36	|Q	|	|	| V |
16+20	0.7165	0.29	|Q	|	|	| V |
16+25	0.7183	0.26	|Q	|	|	| V |
16+30	0.7199	0.23	Q	|	|	| V |
16+35	0.7213	0.21	Q	|	|	| V |
16+40	0.7225	0.18	Q	|	|	| V |
16+45	0.7236	0.16	Q	|	|	| V |
16+50	0.7246	0.15	Q	|	|	| V |
16+55	0.7256	0.14	Q	|	|	| V |
17+ 0	0.7265	0.13	Q	|	|	| V |
17+ 5	0.7274	0.13	Q	|	|	| V |
17+10	0.7284	0.15	Q	|	|	| V |
17+15	0.7296	0.17	Q	|	|	| V |
17+20	0.7308	0.18	Q	|	|	| V |
17+25	0.7320	0.18	Q	|	|	| V |
17+30	0.7333	0.18	Q	|	|	| V |
17+35	0.7346	0.19	Q	|	|	| V |
17+40	0.7358	0.19	Q	|	|	| V |
17+45	0.7371	0.19	Q	|	|	| V |
17+50	0.7384	0.19	Q	|	|	| V |
17+55	0.7396	0.18	Q	|	|	| V |
18+ 0	0.7408	0.17	Q	|	|	| V |
18+ 5	0.7419	0.16	Q	|	|	| V |
18+10	0.7430	0.16	Q	|	|	| V |
18+15	0.7441	0.16	Q	|	|	| V |
18+20	0.7452	0.16	Q	|	|	| V |
18+25	0.7462	0.16	Q	|	|	| V |
18+30	0.7473	0.16	Q	|	|	| V |
18+35	0.7484	0.15	Q	|	|	| V |
18+40	0.7493	0.14	Q	|	|	| V |
18+45	0.7502	0.13	Q	|	|	| V |
18+50	0.7511	0.12	Q	|	|	| V |
18+55	0.7518	0.11	Q	|	|	| V |
19+ 0	0.7525	0.10	Q	|	|	| V |
19+ 5	0.7531	0.09	Q	|	|	| V |
19+10	0.7538	0.10	Q	|	|	| V |
19+15	0.7545	0.11	Q	|	|	| V |
19+20	0.7553	0.11	Q	|	|	| V |
19+25	0.7562	0.13	Q	|	|	| V |
19+30	0.7571	0.14	Q	|	|	| V |
19+35	0.7581	0.14	Q	|	|	| V |

19+40	0.7590	0.13	Q	|	|	|	V |
19+45	0.7599	0.12	Q	|	|	|	V |
19+50	0.7607	0.12	Q	|	|	|	V |
19+55	0.7614	0.10	Q	|	|	|	V |
20+ 0	0.7620	0.09	Q	|	|	|	V |
20+ 5	0.7626	0.09	Q	|	|	|	V |
20+10	0.7633	0.10	Q	|	|	|	V |
20+15	0.7641	0.11	Q	|	|	|	V |
20+20	0.7648	0.11	Q	|	|	|	V |
20+25	0.7656	0.11	Q	|	|	|	V |
20+30	0.7664	0.11	Q	|	|	|	V |
20+35	0.7672	0.11	Q	|	|	|	V |
20+40	0.7679	0.11	Q	|	|	|	V |
20+45	0.7687	0.11	Q	|	|	|	V |
20+50	0.7695	0.11	Q	|	|	|	V |
20+55	0.7702	0.10	Q	|	|	|	V |
21+ 0	0.7708	0.09	Q	|	|	|	V |
21+ 5	0.7714	0.09	Q	|	|	|	V |
21+10	0.7721	0.10	Q	|	|	|	V |
21+15	0.7728	0.11	Q	|	|	|	V |
21+20	0.7736	0.11	Q	|	|	|	V |
21+25	0.7742	0.10	Q	|	|	|	V|
21+30	0.7748	0.09	Q	|	|	|	V|
21+35	0.7754	0.09	Q	|	|	|	V|
21+40	0.7761	0.10	Q	|	|	|	V|
21+45	0.7768	0.11	Q	|	|	|	V|
21+50	0.7775	0.11	Q	|	|	|	V|
21+55	0.7782	0.10	Q	|	|	|	V|
22+ 0	0.7788	0.09	Q	|	|	|	V|
22+ 5	0.7794	0.09	Q	|	|	|	V|
22+10	0.7800	0.10	Q	|	|	|	V|
22+15	0.7808	0.11	Q	|	|	|	V|
22+20	0.7815	0.11	Q	|	|	|	V|
22+25	0.7822	0.10	Q	|	|	|	V|
22+30	0.7828	0.09	Q	|	|	|	V|
22+35	0.7833	0.08	Q	|	|	|	V|
22+40	0.7839	0.08	Q	|	|	|	V|
22+45	0.7845	0.08	Q	|	|	|	V|
22+50	0.7850	0.08	Q	|	|	|	V|
22+55	0.7855	0.08	Q	|	|	|	V|
23+ 0	0.7861	0.08	Q	|	|	|	V|
23+ 5	0.7866	0.08	Q	|	|	|	V|
23+10	0.7872	0.08	Q	|	|	|	V|
23+15	0.7877	0.08	Q	|	|	|	V|
23+20	0.7882	0.08	Q	|	|	|	V|
23+25	0.7887	0.08	Q	|	|	|	V|
23+30	0.7893	0.08	Q	|	|	|	V|
23+35	0.7898	0.08	Q	|	|	|	V|
23+40	0.7903	0.08	Q	|	|	|	V|
23+45	0.7909	0.08	Q	|	|	|	V|
23+50	0.7914	0.08	Q	|	|	|	V|
23+55	0.7919	0.08	Q	|	|	|	V|
24+ 0	0.7925	0.08	Q	|	|	|	V|
24+ 5	0.7929	0.07	Q	|	|	|	V|
24+10	0.7933	0.05	Q	|	|	|	V|
24+15	0.7935	0.03	Q	|	|	|	V|
24+20	0.7936	0.02	Q	|	|	|	V|
24+25	0.7937	0.01	Q	|	|	|	V|
24+30	0.7937	0.01	Q	|	|	|	V|
24+35	0.7938	0.01	Q	|	|	|	V|

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   24+40       0.7938      0.01  Q          |          |          |         V|
   24+45       0.7939      0.00  Q          |          |          |         V|
   24+50       0.7939      0.00  Q          |          |          |         V|
   24+55       0.7939      0.00  Q          |          |          |         V|
   25+ 0       0.7939      0.00  Q          |          |          |         V|
   25+ 5       0.7939      0.00  Q          |          |          |         V|
   25+10       0.7939      0.00  Q          |          |          |          V
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U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750BE24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
Existing
100 year 24 hour

Drainage Area = 59.55(Ac.) = 0.093 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 59.55(Ac.) = 0.093 Sq. Mi.
Length along longest watercourse = 2433.00(Ft.)
Length along longest watercourse measured to centroid = 1195.00(Ft.)
Length along longest watercourse = 0.461 Mi.
Length along longest watercourse measured to centroid = 0.226 Mi.
Difference in elevation = 18.00(Ft.)
Slope along watercourse = 39.0629 Ft./Mi.
Average Manning's 'N' = 0.030
Lag time = 0.152 Hr.
Lag time = 9.12 Min.
25% of lag time = 2.28 Min.
40% of lag time = 3.65 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
59.55	1.60	95.28

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
59.55	4.00	238.20

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 99.99 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
59.550	77.00	0.000

Total Area Entered = 59.55(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
77.0	89.2	0.139	0.000	0.139	1.000	0.139
					Sum (F) =	0.139

Area averaged mean soil loss (F) (In/Hr) = 0.139
Minimum soil loss rate ((In/Hr)) = 0.070
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.900

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	54.826	7.085	4.252
2	0.167	109.653	30.101	18.065
3	0.250	164.479	28.058	16.839
4	0.333	219.305	11.440	6.865
5	0.417	274.132	6.420	3.853
6	0.500	328.958	4.417	2.651
7	0.583	383.785	3.196	1.918
8	0.667	438.611	2.314	1.389
9	0.750	493.437	1.749	1.050
10	0.833	548.264	1.477	0.887
11	0.917	603.090	1.106	0.664
12	1.000	657.916	0.863	0.518
13	1.083	712.743	0.629	0.377
14	1.167	767.569	0.548	0.329
15	1.250	822.395	0.598	0.359
		Sum = 100.000	Sum=	60.015

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.247)	0.029	0.003
2	0.17	0.07	0.032	(0.246)	0.029	0.003
3	0.25	0.07	0.032	(0.245)	0.029	0.003
4	0.33	0.10	0.048	(0.244)	0.043	0.005

5	0.42	0.10	0.048	(0.243)	0.043	0.005
6	0.50	0.10	0.048	(0.242)	0.043	0.005
7	0.58	0.10	0.048	(0.241)	0.043	0.005
8	0.67	0.10	0.048	(0.240)	0.043	0.005
9	0.75	0.10	0.048	(0.239)	0.043	0.005
10	0.83	0.13	0.064	(0.238)	0.058	0.006
11	0.92	0.13	0.064	(0.237)	0.058	0.006
12	1.00	0.13	0.064	(0.236)	0.058	0.006
13	1.08	0.10	0.048	(0.235)	0.043	0.005
14	1.17	0.10	0.048	(0.234)	0.043	0.005
15	1.25	0.10	0.048	(0.233)	0.043	0.005
16	1.33	0.10	0.048	(0.233)	0.043	0.005
17	1.42	0.10	0.048	(0.232)	0.043	0.005
18	1.50	0.10	0.048	(0.231)	0.043	0.005
19	1.58	0.10	0.048	(0.230)	0.043	0.005
20	1.67	0.10	0.048	(0.229)	0.043	0.005
21	1.75	0.10	0.048	(0.228)	0.043	0.005
22	1.83	0.13	0.064	(0.227)	0.058	0.006
23	1.92	0.13	0.064	(0.226)	0.058	0.006
24	2.00	0.13	0.064	(0.225)	0.058	0.006
25	2.08	0.13	0.064	(0.224)	0.058	0.006
26	2.17	0.13	0.064	(0.223)	0.058	0.006
27	2.25	0.13	0.064	(0.222)	0.058	0.006
28	2.33	0.13	0.064	(0.222)	0.058	0.006
29	2.42	0.13	0.064	(0.221)	0.058	0.006
30	2.50	0.13	0.064	(0.220)	0.058	0.006
31	2.58	0.17	0.080	(0.219)	0.072	0.008
32	2.67	0.17	0.080	(0.218)	0.072	0.008
33	2.75	0.17	0.080	(0.217)	0.072	0.008
34	2.83	0.17	0.080	(0.216)	0.072	0.008
35	2.92	0.17	0.080	(0.215)	0.072	0.008
36	3.00	0.17	0.080	(0.214)	0.072	0.008
37	3.08	0.17	0.080	(0.213)	0.072	0.008
38	3.17	0.17	0.080	(0.213)	0.072	0.008
39	3.25	0.17	0.080	(0.212)	0.072	0.008
40	3.33	0.17	0.080	(0.211)	0.072	0.008
41	3.42	0.17	0.080	(0.210)	0.072	0.008
42	3.50	0.17	0.080	(0.209)	0.072	0.008
43	3.58	0.17	0.080	(0.208)	0.072	0.008
44	3.67	0.17	0.080	(0.207)	0.072	0.008
45	3.75	0.17	0.080	(0.206)	0.072	0.008
46	3.83	0.20	0.096	(0.206)	0.086	0.010
47	3.92	0.20	0.096	(0.205)	0.086	0.010
48	4.00	0.20	0.096	(0.204)	0.086	0.010
49	4.08	0.20	0.096	(0.203)	0.086	0.010
50	4.17	0.20	0.096	(0.202)	0.086	0.010
51	4.25	0.20	0.096	(0.201)	0.086	0.010
52	4.33	0.23	0.112	(0.200)	0.101	0.011
53	4.42	0.23	0.112	(0.200)	0.101	0.011
54	4.50	0.23	0.112	(0.199)	0.101	0.011
55	4.58	0.23	0.112	(0.198)	0.101	0.011
56	4.67	0.23	0.112	(0.197)	0.101	0.011
57	4.75	0.23	0.112	(0.196)	0.101	0.011
58	4.83	0.27	0.128	(0.195)	0.115	0.013
59	4.92	0.27	0.128	(0.194)	0.115	0.013
60	5.00	0.27	0.128	(0.194)	0.115	0.013
61	5.08	0.20	0.096	(0.193)	0.086	0.010
62	5.17	0.20	0.096	(0.192)	0.086	0.010
63	5.25	0.20	0.096	(0.191)	0.086	0.010
64	5.33	0.23	0.112	(0.190)	0.101	0.011

65	5.42	0.23	0.112	(0.189)	0.101	0.011
66	5.50	0.23	0.112	(0.189)	0.101	0.011
67	5.58	0.27	0.128	(0.188)	0.115	0.013
68	5.67	0.27	0.128	(0.187)	0.115	0.013
69	5.75	0.27	0.128	(0.186)	0.115	0.013
70	5.83	0.27	0.128	(0.185)	0.115	0.013
71	5.92	0.27	0.128	(0.184)	0.115	0.013
72	6.00	0.27	0.128	(0.184)	0.115	0.013
73	6.08	0.30	0.144	(0.183)	0.130	0.014
74	6.17	0.30	0.144	(0.182)	0.130	0.014
75	6.25	0.30	0.144	(0.181)	0.130	0.014
76	6.33	0.30	0.144	(0.180)	0.130	0.014
77	6.42	0.30	0.144	(0.180)	0.130	0.014
78	6.50	0.30	0.144	(0.179)	0.130	0.014
79	6.58	0.33	0.160	(0.178)	0.144	0.016
80	6.67	0.33	0.160	(0.177)	0.144	0.016
81	6.75	0.33	0.160	(0.176)	0.144	0.016
82	6.83	0.33	0.160	(0.176)	0.144	0.016
83	6.92	0.33	0.160	(0.175)	0.144	0.016
84	7.00	0.33	0.160	(0.174)	0.144	0.016
85	7.08	0.33	0.160	(0.173)	0.144	0.016
86	7.17	0.33	0.160	(0.172)	0.144	0.016
87	7.25	0.33	0.160	(0.172)	0.144	0.016
88	7.33	0.37	0.176	(0.171)	0.158	0.018
89	7.42	0.37	0.176	(0.170)	0.158	0.018
90	7.50	0.37	0.176	(0.169)	0.158	0.018
91	7.58	0.40	0.192	0.168	(0.173)	0.023
92	7.67	0.40	0.192	0.168	(0.173)	0.024
93	7.75	0.40	0.192	0.167	(0.173)	0.025
94	7.83	0.43	0.208	0.166	(0.187)	0.042
95	7.92	0.43	0.208	0.165	(0.187)	0.043
96	8.00	0.43	0.208	0.165	(0.187)	0.043
97	8.08	0.50	0.240	0.164	(0.216)	0.076
98	8.17	0.50	0.240	0.163	(0.216)	0.077
99	8.25	0.50	0.240	0.162	(0.216)	0.078
100	8.33	0.50	0.240	0.162	(0.216)	0.078
101	8.42	0.50	0.240	0.161	(0.216)	0.079
102	8.50	0.50	0.240	0.160	(0.216)	0.080
103	8.58	0.53	0.256	0.159	(0.230)	0.097
104	8.67	0.53	0.256	0.159	(0.230)	0.097
105	8.75	0.53	0.256	0.158	(0.230)	0.098
106	8.83	0.57	0.272	0.157	(0.245)	0.115
107	8.92	0.57	0.272	0.156	(0.245)	0.116
108	9.00	0.57	0.272	0.156	(0.245)	0.116
109	9.08	0.63	0.304	0.155	(0.274)	0.149
110	9.17	0.63	0.304	0.154	(0.274)	0.150
111	9.25	0.63	0.304	0.153	(0.274)	0.151
112	9.33	0.67	0.320	0.153	(0.288)	0.167
113	9.42	0.67	0.320	0.152	(0.288)	0.168
114	9.50	0.67	0.320	0.151	(0.288)	0.169
115	9.58	0.70	0.336	0.150	(0.302)	0.185
116	9.67	0.70	0.336	0.150	(0.302)	0.186
117	9.75	0.70	0.336	0.149	(0.302)	0.187
118	9.83	0.73	0.352	0.148	(0.317)	0.204
119	9.92	0.73	0.352	0.148	(0.317)	0.204
120	10.00	0.73	0.352	0.147	(0.317)	0.205
121	10.08	0.50	0.240	0.146	(0.216)	0.094
122	10.17	0.50	0.240	0.145	(0.216)	0.094
123	10.25	0.50	0.240	0.145	(0.216)	0.095
124	10.33	0.50	0.240	0.144	(0.216)	0.096

125	10.42	0.50	0.240	0.143	(	0.216)	0.097
126	10.50	0.50	0.240	0.143	(	0.216)	0.097
127	10.58	0.67	0.320	0.142	(	0.288)	0.178
128	10.67	0.67	0.320	0.141	(	0.288)	0.179
129	10.75	0.67	0.320	0.141	(	0.288)	0.179
130	10.83	0.67	0.320	0.140	(	0.288)	0.180
131	10.92	0.67	0.320	0.139	(	0.288)	0.181
132	11.00	0.67	0.320	0.139	(	0.288)	0.181
133	11.08	0.63	0.304	0.138	(	0.274)	0.166
134	11.17	0.63	0.304	0.137	(	0.274)	0.167
135	11.25	0.63	0.304	0.137	(	0.274)	0.167
136	11.33	0.63	0.304	0.136	(	0.274)	0.168
137	11.42	0.63	0.304	0.135	(	0.274)	0.169
138	11.50	0.63	0.304	0.134	(	0.274)	0.169
139	11.58	0.57	0.272	0.134	(	0.245)	0.138
140	11.67	0.57	0.272	0.133	(	0.245)	0.139
141	11.75	0.57	0.272	0.132	(	0.245)	0.139
142	11.83	0.60	0.288	0.132	(	0.259)	0.156
143	11.92	0.60	0.288	0.131	(	0.259)	0.157
144	12.00	0.60	0.288	0.131	(	0.259)	0.157
145	12.08	0.83	0.400	0.130	(	0.360)	0.270
146	12.17	0.83	0.400	0.129	(	0.360)	0.271
147	12.25	0.83	0.400	0.129	(	0.360)	0.271
148	12.33	0.87	0.416	0.128	(	0.374)	0.288
149	12.42	0.87	0.416	0.127	(	0.374)	0.289
150	12.50	0.87	0.416	0.127	(	0.374)	0.289
151	12.58	0.93	0.448	0.126	(	0.403)	0.322
152	12.67	0.93	0.448	0.125	(	0.403)	0.323
153	12.75	0.93	0.448	0.125	(	0.403)	0.323
154	12.83	0.97	0.464	0.124	(	0.418)	0.340
155	12.92	0.97	0.464	0.123	(	0.418)	0.340
156	13.00	0.97	0.464	0.123	(	0.418)	0.341
157	13.08	1.13	0.544	0.122	(	0.490)	0.422
158	13.17	1.13	0.544	0.122	(	0.490)	0.422
159	13.25	1.13	0.544	0.121	(	0.490)	0.423
160	13.33	1.13	0.544	0.120	(	0.490)	0.424
161	13.42	1.13	0.544	0.120	(	0.490)	0.424
162	13.50	1.13	0.544	0.119	(	0.490)	0.425
163	13.58	0.77	0.368	0.119	(	0.331)	0.249
164	13.67	0.77	0.368	0.118	(	0.331)	0.250
165	13.75	0.77	0.368	0.117	(	0.331)	0.251
166	13.83	0.77	0.368	0.117	(	0.331)	0.251
167	13.92	0.77	0.368	0.116	(	0.331)	0.252
168	14.00	0.77	0.368	0.116	(	0.331)	0.252
169	14.08	0.90	0.432	0.115	(	0.389)	0.317
170	14.17	0.90	0.432	0.114	(	0.389)	0.318
171	14.25	0.90	0.432	0.114	(	0.389)	0.318
172	14.33	0.87	0.416	0.113	(	0.374)	0.303
173	14.42	0.87	0.416	0.113	(	0.374)	0.303
174	14.50	0.87	0.416	0.112	(	0.374)	0.304
175	14.58	0.87	0.416	0.111	(	0.374)	0.304
176	14.67	0.87	0.416	0.111	(	0.374)	0.305
177	14.75	0.87	0.416	0.110	(	0.374)	0.306
178	14.83	0.83	0.400	0.110	(	0.360)	0.290
179	14.92	0.83	0.400	0.109	(	0.360)	0.291
180	15.00	0.83	0.400	0.109	(	0.360)	0.291
181	15.08	0.80	0.384	0.108	(	0.346)	0.276
182	15.17	0.80	0.384	0.108	(	0.346)	0.276
183	15.25	0.80	0.384	0.107	(	0.346)	0.277
184	15.33	0.77	0.368	0.106	(	0.331)	0.262

185	15.42	0.77	0.368	0.106	(0.331)	0.262
186	15.50	0.77	0.368	0.105	(0.331)	0.263
187	15.58	0.63	0.304	0.105	(0.274)	0.199
188	15.67	0.63	0.304	0.104	(0.274)	0.200
189	15.75	0.63	0.304	0.104	(0.274)	0.200
190	15.83	0.63	0.304	0.103	(0.274)	0.201
191	15.92	0.63	0.304	0.103	(0.274)	0.201
192	16.00	0.63	0.304	0.102	(0.274)	0.202
193	16.08	0.13	0.064	(0.102)	0.058	0.006
194	16.17	0.13	0.064	(0.101)	0.058	0.006
195	16.25	0.13	0.064	(0.101)	0.058	0.006
196	16.33	0.13	0.064	(0.100)	0.058	0.006
197	16.42	0.13	0.064	(0.100)	0.058	0.006
198	16.50	0.13	0.064	(0.099)	0.058	0.006
199	16.58	0.10	0.048	(0.099)	0.043	0.005
200	16.67	0.10	0.048	(0.098)	0.043	0.005
201	16.75	0.10	0.048	(0.098)	0.043	0.005
202	16.83	0.10	0.048	(0.097)	0.043	0.005
203	16.92	0.10	0.048	(0.097)	0.043	0.005
204	17.00	0.10	0.048	(0.096)	0.043	0.005
205	17.08	0.17	0.080	(0.096)	0.072	0.008
206	17.17	0.17	0.080	(0.095)	0.072	0.008
207	17.25	0.17	0.080	(0.095)	0.072	0.008
208	17.33	0.17	0.080	(0.094)	0.072	0.008
209	17.42	0.17	0.080	(0.094)	0.072	0.008
210	17.50	0.17	0.080	(0.093)	0.072	0.008
211	17.58	0.17	0.080	(0.093)	0.072	0.008
212	17.67	0.17	0.080	(0.092)	0.072	0.008
213	17.75	0.17	0.080	(0.092)	0.072	0.008
214	17.83	0.13	0.064	(0.091)	0.058	0.006
215	17.92	0.13	0.064	(0.091)	0.058	0.006
216	18.00	0.13	0.064	(0.090)	0.058	0.006
217	18.08	0.13	0.064	(0.090)	0.058	0.006
218	18.17	0.13	0.064	(0.090)	0.058	0.006
219	18.25	0.13	0.064	(0.089)	0.058	0.006
220	18.33	0.13	0.064	(0.089)	0.058	0.006
221	18.42	0.13	0.064	(0.088)	0.058	0.006
222	18.50	0.13	0.064	(0.088)	0.058	0.006
223	18.58	0.10	0.048	(0.087)	0.043	0.005
224	18.67	0.10	0.048	(0.087)	0.043	0.005
225	18.75	0.10	0.048	(0.087)	0.043	0.005
226	18.83	0.07	0.032	(0.086)	0.029	0.003
227	18.92	0.07	0.032	(0.086)	0.029	0.003
228	19.00	0.07	0.032	(0.085)	0.029	0.003
229	19.08	0.10	0.048	(0.085)	0.043	0.005
230	19.17	0.10	0.048	(0.085)	0.043	0.005
231	19.25	0.10	0.048	(0.084)	0.043	0.005
232	19.33	0.13	0.064	(0.084)	0.058	0.006
233	19.42	0.13	0.064	(0.083)	0.058	0.006
234	19.50	0.13	0.064	(0.083)	0.058	0.006
235	19.58	0.10	0.048	(0.083)	0.043	0.005
236	19.67	0.10	0.048	(0.082)	0.043	0.005
237	19.75	0.10	0.048	(0.082)	0.043	0.005
238	19.83	0.07	0.032	(0.082)	0.029	0.003
239	19.92	0.07	0.032	(0.081)	0.029	0.003
240	20.00	0.07	0.032	(0.081)	0.029	0.003
241	20.08	0.10	0.048	(0.080)	0.043	0.005
242	20.17	0.10	0.048	(0.080)	0.043	0.005
243	20.25	0.10	0.048	(0.080)	0.043	0.005
244	20.33	0.10	0.048	(0.079)	0.043	0.005

245	20.42	0.10	0.048	(0.079)	0.043	0.005
246	20.50	0.10	0.048	(0.079)	0.043	0.005
247	20.58	0.10	0.048	(0.078)	0.043	0.005
248	20.67	0.10	0.048	(0.078)	0.043	0.005
249	20.75	0.10	0.048	(0.078)	0.043	0.005
250	20.83	0.07	0.032	(0.077)	0.029	0.003
251	20.92	0.07	0.032	(0.077)	0.029	0.003
252	21.00	0.07	0.032	(0.077)	0.029	0.003
253	21.08	0.10	0.048	(0.076)	0.043	0.005
254	21.17	0.10	0.048	(0.076)	0.043	0.005
255	21.25	0.10	0.048	(0.076)	0.043	0.005
256	21.33	0.07	0.032	(0.076)	0.029	0.003
257	21.42	0.07	0.032	(0.075)	0.029	0.003
258	21.50	0.07	0.032	(0.075)	0.029	0.003
259	21.58	0.10	0.048	(0.075)	0.043	0.005
260	21.67	0.10	0.048	(0.074)	0.043	0.005
261	21.75	0.10	0.048	(0.074)	0.043	0.005
262	21.83	0.07	0.032	(0.074)	0.029	0.003
263	21.92	0.07	0.032	(0.074)	0.029	0.003
264	22.00	0.07	0.032	(0.073)	0.029	0.003
265	22.08	0.10	0.048	(0.073)	0.043	0.005
266	22.17	0.10	0.048	(0.073)	0.043	0.005
267	22.25	0.10	0.048	(0.073)	0.043	0.005
268	22.33	0.07	0.032	(0.073)	0.029	0.003
269	22.42	0.07	0.032	(0.072)	0.029	0.003
270	22.50	0.07	0.032	(0.072)	0.029	0.003
271	22.58	0.07	0.032	(0.072)	0.029	0.003
272	22.67	0.07	0.032	(0.072)	0.029	0.003
273	22.75	0.07	0.032	(0.071)	0.029	0.003
274	22.83	0.07	0.032	(0.071)	0.029	0.003
275	22.92	0.07	0.032	(0.071)	0.029	0.003
276	23.00	0.07	0.032	(0.071)	0.029	0.003
277	23.08	0.07	0.032	(0.071)	0.029	0.003
278	23.17	0.07	0.032	(0.071)	0.029	0.003
279	23.25	0.07	0.032	(0.070)	0.029	0.003
280	23.33	0.07	0.032	(0.070)	0.029	0.003
281	23.42	0.07	0.032	(0.070)	0.029	0.003
282	23.50	0.07	0.032	(0.070)	0.029	0.003
283	23.58	0.07	0.032	(0.070)	0.029	0.003
284	23.67	0.07	0.032	(0.070)	0.029	0.003
285	23.75	0.07	0.032	(0.070)	0.029	0.003
286	23.83	0.07	0.032	(0.070)	0.029	0.003
287	23.92	0.07	0.032	(0.070)	0.029	0.003
288	24.00	0.07	0.032	(0.070)	0.029	0.003

(Loss Rate Not Used)

Sum = 100.0 Sum = 22.5

Flood volume = Effective rainfall 1.87(In)
times area 59.5(Ac.)/[(In)/(Ft.)] = 9.3(Ac.Ft)
Total soil loss = 2.13(In)
Total soil loss = 10.550(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 404999.1 Cubic Feet
Total soil loss = 459566.4 Cubic Feet

Peak flow rate of this hydrograph = 24.721(CFS)

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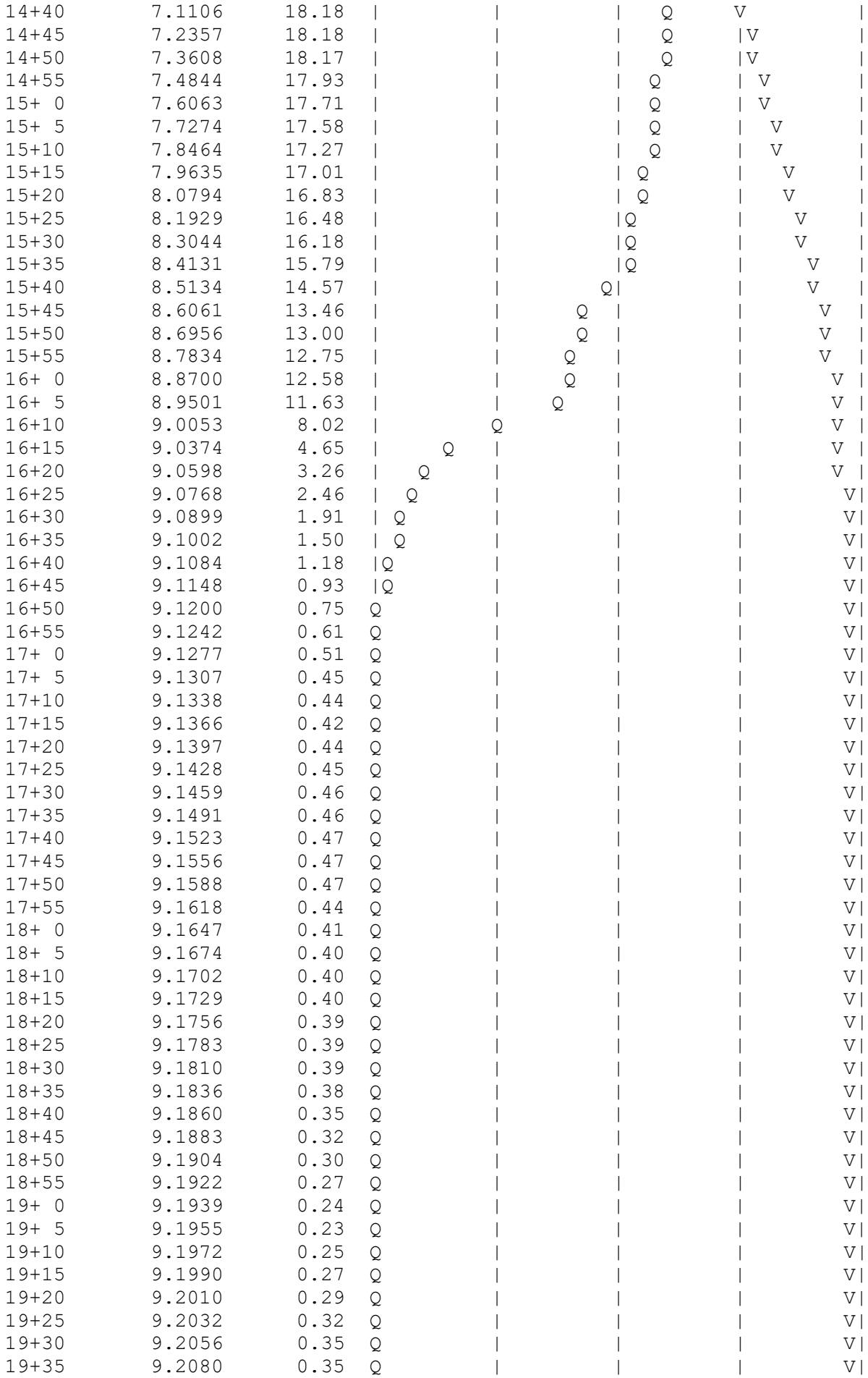
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	7.5	15.0	22.5	30.0
0+ 5	0.0001	0.01	Q	|	|	|	|
0+10	0.0006	0.07	Q	|	|	|	|
0+15	0.0014	0.13	Q	|	|	|	|
0+20	0.0025	0.15	Q	|	|	|	|
0+25	0.0039	0.20	Q	|	|	|	|
0+30	0.0054	0.23	Q	|	|	|	|
0+35	0.0072	0.25	Q	|	|	|	|
0+40	0.0089	0.26	Q	|	|	|	|
0+45	0.0108	0.27	Q	|	|	|	|
0+50	0.0127	0.28	Q	|	|	|	|
0+55	0.0148	0.31	Q	|	|	|	|
1+ 0	0.0172	0.34	Q	|	|	|	|
1+ 5	0.0196	0.35	Q	|	|	|	|
1+10	0.0219	0.33	Q	|	|	|	|
1+15	0.0240	0.31	Q	|	|	|	|
1+20	0.0261	0.30	Q	|	|	|	|
1+25	0.0281	0.30	Q	|	|	|	|
1+30	0.0301	0.30	Q	|	|	|	|
1+35	0.0322	0.29	Q	|	|	|	|
1+40	0.0342	0.29	Q	|	|	|	|
1+45	0.0362	0.29	Q	|	|	|	|
1+50	0.0382	0.30	Q	|	|	|	|
1+55	0.0405	0.33	Q	|	|	|	|
2+ 0	0.0429	0.35	Q	|	|	|	|
2+ 5	0.0454	0.36	Q	|	|	|	|
2+10	0.0479	0.37	Q	|	|	|	|
2+15	0.0505	0.37	Q	|	|	|	|
2+20	0.0531	0.38	Q	|	|	|	|
2+25	0.0557	0.38	Q	|	|	|	|
2+30	0.0583	0.38	Q	|	|	|	|
2+35	0.0610	0.39	Q	|	|	|	|
2+40	0.0638	0.42	Q	|	|	|	|
2+45	0.0669	0.45	Q	|	|	|	|
2+50	0.0701	0.46	Q	|	|	|	|
2+55	0.0732	0.46	Q	|	|	|	|
3+ 0	0.0765	0.47	Q	|	|	|	|
3+ 5	0.0797	0.47	Q	|	|	|	|
3+10	0.0830	0.47	Q	|	|	|	|
3+15	0.0863	0.48	Q	|	|	|	|
3+20	0.0895	0.48	Q	|	|	|	|
3+25	0.0928	0.48	Q	|	|	|	|
3+30	0.0961	0.48	Q	|	|	|	|
3+35	0.0994	0.48	Q	|	|	|	|
3+40	0.1027	0.48	Q	|	|	|	|
3+45	0.1060	0.48	Q	|	|	|	|
3+50	0.1094	0.49	Q	|	|	|	|
3+55	0.1129	0.52	Q	|	|	|	|
4+ 0	0.1167	0.54	Q	|	|	|	|
4+ 5	0.1205	0.55	Q	|	|	|	|
4+10	0.1244	0.56	Q	|	|	|	|
4+15	0.1282	0.56	Q	|	|	|	|
4+20	0.1322	0.57	Q	|	|	|	|
4+25	0.1364	0.61	Q	|	|	|	|
4+30	0.1407	0.63	Q	|	|	|	|
4+35	0.1452	0.65	Q	|	|	|	|

4+40	0.1497	0.65	Q	|	|	|	|
4+45	0.1542	0.66	Q	|	|	|	|
4+50	0.1588	0.67	Q	|	|	|	|
4+55	0.1637	0.70	Q	|	|	|	|
5+ 0	0.1687	0.73	Q	|	|	|	|
5+ 5	0.1737	0.73	Q	|	|	|	|
5+10	0.1784	0.68	Q	|	|	|	|
5+15	0.1827	0.63	Q	|	|	|	|
5+20	0.1870	0.62	Q	|	|	|	|
5+25	0.1914	0.64	Q	|	|	|	|
5+30	0.1959	0.66	Q	|	|	|	|
5+35	0.2005	0.67	Q	|	|	|	|
5+40	0.2054	0.70	Q	|	|	|	|
5+45	0.2104	0.73	Q	|	|	|	|
5+50	0.2155	0.74	Q	|	|	|	|
5+55	0.2207	0.75	VQ	|	|	|	|
6+ 0	0.2259	0.75	VQ	|	|	|	|
6+ 5	0.2311	0.76	VQ	|	|	|	|
6+10	0.2366	0.80	|Q	|	|	|	|
6+15	0.2423	0.82	|Q	|	|	|	|
6+20	0.2481	0.84	|Q	|	|	|	|
6+25	0.2539	0.85	|Q	|	|	|	|
6+30	0.2598	0.85	|Q	|	|	|	|
6+35	0.2657	0.86	|Q	|	|	|	|
6+40	0.2718	0.89	|Q	|	|	|	|
6+45	0.2782	0.92	|Q	|	|	|	|
6+50	0.2846	0.93	|Q	|	|	|	|
6+55	0.2911	0.94	|Q	|	|	|	|
7+ 0	0.2976	0.95	|Q	|	|	|	|
7+ 5	0.3042	0.95	|Q	|	|	|	|
7+10	0.3107	0.95	|Q	|	|	|	|
7+15	0.3173	0.96	|Q	|	|	|	|
7+20	0.3240	0.96	|Q	|	|	|	|
7+25	0.3308	0.99	|Q	|	|	|	|
7+30	0.3378	1.02	|Q	|	|	|	|
7+35	0.3451	1.06	|Q	|	|	|	|
7+40	0.3532	1.17	|Q	|	|	|	|
7+45	0.3621	1.30	|Q	|	|	|	|
7+50	0.3720	1.44	|Q	|	|	|	|
7+55	0.3844	1.79	|VQ	|	|	|	|
8+ 0	0.3989	2.11	|VQ	|	|	|	|
8+ 5	0.4155	2.41	|V Q	|	|	|	|
8+10	0.4369	3.10	|V Q	|	|	|	|
8+15	0.4626	3.73	|V Q	|	|	|	|
8+20	0.4904	4.03	| V Q	|	|	|	|
8+25	0.5195	4.23	| V Q	|	|	|	|
8+30	0.5496	4.38	| V Q	|	|	|	|
8+35	0.5811	4.57	| V Q	|	|	|	|
8+40	0.6152	4.96	| V Q	|	|	|	|
8+45	0.6519	5.32	| V Q	|	|	|	|
8+50	0.6903	5.57	| V Q	|	|	|	|
8+55	0.7316	6.00	| V Q	|	|	|	|
9+ 0	0.7755	6.38	| V Q |	|	|	|
9+ 5	0.8217	6.71	| V Q |	|	|	|
9+10	0.8728	7.43	| V Q|	|	|	|
9+15	0.9285	8.08	| V Q	|	|	|
9+20	0.9867	8.46	| V |Q	|	|	|
9+25	1.0483	8.95	| V |Q	|	|	|
9+30	1.1129	9.37	| V | Q	|	|	|
9+35	1.1795	9.67	| V | Q	|	|	|

9+40	1.2493	10.13	V	Q			
9+45	1.3218	10.53	V	Q			
9+50	1.3963	10.82	V	Q			
9+55	1.4739	11.26	V	Q			
10+ 0	1.5542	11.66	V	Q			
10+ 5	1.6326	11.39	V	Q			
10+10	1.6981	9.51	V	Q			
10+15	1.7515	7.75	V	Q			
10+20	1.8002	7.07	V	Q			
10+25	1.8465	6.72	V	Q			
10+30	1.8912	6.50	V	Q			
10+35	1.9373	6.69	V	Q			
10+40	1.9926	8.03	V	Q			
10+45	2.0568	9.32	V	Q			
10+50	2.1244	9.82	V	Q			
10+55	2.1940	10.10	V	Q			
11+ 0	2.2649	10.30	V	Q			
11+ 5	2.3364	10.38	V	Q			
11+10	2.4067	10.21	V	Q			
11+15	2.4758	10.03	V	Q			
11+20	2.5448	10.03	V	Q			
11+25	2.6141	10.06	V	Q			
11+30	2.6837	10.10	V	Q			
11+35	2.7526	10.00	V	Q			
11+40	2.8178	9.47	V	Q			
11+45	2.8797	8.98	Q	V			
11+50	2.9407	8.86	Q	V			
11+55	3.0030	9.05	V	Q			
12+ 0	3.0668	9.27	Q	V			
12+ 5	3.1345	9.83	V	Q			
12+10	3.2165	11.90	V	Q			
12+15	3.3117	13.83	V	Q			
12+20	3.4131	14.71	V	Q			
12+25	3.5196	15.47	V	Q			
12+30	3.6303	16.08	V	Q			
12+35	3.7445	16.58	V	Q			
12+40	3.8644	17.41	V	Q			
12+45	3.9894	18.15	V	Q			
12+50	4.1176	18.61	V	Q			
12+55	4.2495	19.16	V	Q			
13+ 0	4.3847	19.63	V	Q			
13+ 5	4.5241	20.24	V	Q			
13+10	4.6748	21.88	V	Q			
13+15	4.8359	23.39	V	Q			
13+20	5.0014	24.04	V	Q			
13+25	5.1697	24.43	V	Q			
13+30	5.3400	24.72	V	Q			
13+35	5.5066	24.19	V	Q			
13+40	5.6524	21.18	V	Q			
13+45	5.7788	18.35	V	Q			
13+50	5.8977	17.26	V	Q			
13+55	6.0125	16.67	V	Q			
14+ 0	6.1247	16.29	V	Q			
14+ 5	6.2369	16.29	V	Q			
14+10	6.3558	17.27	V	Q			
14+15	6.4813	18.22	V	Q			
14+20	6.6085	18.47	V	Q			
14+25	6.7349	18.35	V	Q			
14+30	6.8602	18.19	V	Q			
14+35	6.9854	18.17	V	Q			



19+40	9.2103	0.33	Q	|	|	|	V|
19+45	9.2124	0.31	Q	|	|	|	V|
19+50	9.2144	0.29	Q	|	|	|	V|
19+55	9.2162	0.26	Q	|	|	|	V|
20+ 0	9.2178	0.23	Q	|	|	|	V|
20+ 5	9.2193	0.23	Q	|	|	|	V|
20+10	9.2210	0.25	Q	|	|	|	V|
20+15	9.2229	0.27	Q	|	|	|	V|
20+20	9.2248	0.28	Q	|	|	|	V|
20+25	9.2267	0.28	Q	|	|	|	V|
20+30	9.2287	0.28	Q	|	|	|	V|
20+35	9.2306	0.28	Q	|	|	|	V|
20+40	9.2326	0.28	Q	|	|	|	V|
20+45	9.2345	0.28	Q	|	|	|	V|
20+50	9.2365	0.28	Q	|	|	|	V|
20+55	9.2382	0.25	Q	|	|	|	V|
21+ 0	9.2397	0.22	Q	|	|	|	V|
21+ 5	9.2412	0.22	Q	|	|	|	V|
21+10	9.2429	0.24	Q	|	|	|	V|
21+15	9.2448	0.27	Q	|	|	|	V|
21+20	9.2466	0.27	Q	|	|	|	V|
21+25	9.2483	0.24	Q	|	|	|	V|
21+30	9.2498	0.22	Q	|	|	|	V|
21+35	9.2513	0.22	Q	|	|	|	V|
21+40	9.2529	0.24	Q	|	|	|	V|
21+45	9.2547	0.26	Q	|	|	|	V|
21+50	9.2566	0.27	Q	|	|	|	V|
21+55	9.2582	0.24	Q	|	|	|	V|
22+ 0	9.2597	0.22	Q	|	|	|	V|
22+ 5	9.2612	0.21	Q	|	|	|	V|
22+10	9.2629	0.24	Q	|	|	|	V|
22+15	9.2647	0.26	Q	|	|	|	V|
22+20	9.2665	0.27	Q	|	|	|	V|
22+25	9.2682	0.24	Q	|	|	|	V|
22+30	9.2696	0.22	Q	|	|	|	V|
22+35	9.2711	0.21	Q	|	|	|	V|
22+40	9.2725	0.20	Q	|	|	|	V|
22+45	9.2739	0.20	Q	|	|	|	V|
22+50	9.2752	0.20	Q	|	|	|	V|
22+55	9.2766	0.20	Q	|	|	|	V|
23+ 0	9.2779	0.20	Q	|	|	|	V|
23+ 5	9.2793	0.19	Q	|	|	|	V|
23+10	9.2806	0.19	Q	|	|	|	V|
23+15	9.2819	0.19	Q	|	|	|	V|
23+20	9.2833	0.19	Q	|	|	|	V|
23+25	9.2846	0.19	Q	|	|	|	V|
23+30	9.2859	0.19	Q	|	|	|	V|
23+35	9.2873	0.19	Q	|	|	|	V|
23+40	9.2886	0.19	Q	|	|	|	V|
23+45	9.2899	0.19	Q	|	|	|	V|
23+50	9.2912	0.19	Q	|	|	|	V|
23+55	9.2925	0.19	Q	|	|	|	V|
24+ 0	9.2939	0.19	Q	|	|	|	V|
24+ 5	9.2951	0.18	Q	|	|	|	V|
24+10	9.2959	0.12	Q	|	|	|	V|
24+15	9.2964	0.07	Q	|	|	|	V|
24+20	9.2967	0.04	Q	|	|	|	V|
24+25	9.2969	0.03	Q	|	|	|	V|
24+30	9.2971	0.02	Q	|	|	|	V|
24+35	9.2972	0.02	Q	|	|	|	V|

24+40	9.2973	0.01	Q	|	|	|	V|
24+45	9.2974	0.01	Q	|	|	|	V|
24+50	9.2974	0.01	Q	|	|	|	V|
24+55	9.2975	0.01	Q	|	|	|	V|
25+ 0	9.2975	0.00	Q	|	|	|	V|
25+ 5	9.2975	0.00	Q	|	|	|	V|
25+10	9.2975	0.00	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750bpa242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
Proposed - Area A
2 year 24 hour

Drainage Area = 13.00(Ac.) = 0.020 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 13.00(Ac.) = 0.020 Sq. Mi.
Length along longest watercourse = 1009.00(Ft.)
Length along longest watercourse measured to centroid = 370.00(Ft.)
Length along longest watercourse = 0.191 Mi.
Length along longest watercourse measured to centroid = 0.070 Mi.
Difference in elevation = 12.70(Ft.)
Slope along watercourse = 66.4579 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.89 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.76 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
13.00	1.60	20.80

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
13.00	4.00	52.00

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 1.600(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.600(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
13.000	69.00	0.900

Total Area Entered = 13.00(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	49.8	0.574	0.900	0.109	1.000	0.109
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.037
Minimum soil loss rate ((In/Hr)) = 0.018
(for 24 hour storm duration)
Note: User entry of the f value
Soil low loss rate (decimal) = 0.180

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	264.610	52.732	6.909
2	0.167	529.220	39.165	5.131
3	0.250	793.831	6.567	0.860
4	0.333	1058.441	1.536	0.201
		Sum = 100.000	Sum=	13.102

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.013	(0.065)		0.002	0.010
2	0.17	0.07	0.013	(0.065)		0.002	0.010
3	0.25	0.07	0.013	(0.065)		0.002	0.010
4	0.33	0.10	0.019	(0.065)		0.003	0.016
5	0.42	0.10	0.019	(0.064)		0.003	0.016
6	0.50	0.10	0.019	(0.064)		0.003	0.016
7	0.58	0.10	0.019	(0.064)		0.003	0.016
8	0.67	0.10	0.019	(0.064)		0.003	0.016
9	0.75	0.10	0.019	(0.063)		0.003	0.016
10	0.83	0.13	0.026	(0.063)		0.005	0.021
11	0.92	0.13	0.026	(0.063)		0.005	0.021
12	1.00	0.13	0.026	(0.063)		0.005	0.021
13	1.08	0.10	0.019	(0.062)		0.003	0.016
14	1.17	0.10	0.019	(0.062)		0.003	0.016

15	1.25	0.10	0.019	(0.062)	0.003	0.016
16	1.33	0.10	0.019	(0.062)	0.003	0.016
17	1.42	0.10	0.019	(0.061)	0.003	0.016
18	1.50	0.10	0.019	(0.061)	0.003	0.016
19	1.58	0.10	0.019	(0.061)	0.003	0.016
20	1.67	0.10	0.019	(0.061)	0.003	0.016
21	1.75	0.10	0.019	(0.060)	0.003	0.016
22	1.83	0.13	0.026	(0.060)	0.005	0.021
23	1.92	0.13	0.026	(0.060)	0.005	0.021
24	2.00	0.13	0.026	(0.060)	0.005	0.021
25	2.08	0.13	0.026	(0.059)	0.005	0.021
26	2.17	0.13	0.026	(0.059)	0.005	0.021
27	2.25	0.13	0.026	(0.059)	0.005	0.021
28	2.33	0.13	0.026	(0.059)	0.005	0.021
29	2.42	0.13	0.026	(0.058)	0.005	0.021
30	2.50	0.13	0.026	(0.058)	0.005	0.021
31	2.58	0.17	0.032	(0.058)	0.006	0.026
32	2.67	0.17	0.032	(0.058)	0.006	0.026
33	2.75	0.17	0.032	(0.057)	0.006	0.026
34	2.83	0.17	0.032	(0.057)	0.006	0.026
35	2.92	0.17	0.032	(0.057)	0.006	0.026
36	3.00	0.17	0.032	(0.057)	0.006	0.026
37	3.08	0.17	0.032	(0.057)	0.006	0.026
38	3.17	0.17	0.032	(0.056)	0.006	0.026
39	3.25	0.17	0.032	(0.056)	0.006	0.026
40	3.33	0.17	0.032	(0.056)	0.006	0.026
41	3.42	0.17	0.032	(0.056)	0.006	0.026
42	3.50	0.17	0.032	(0.055)	0.006	0.026
43	3.58	0.17	0.032	(0.055)	0.006	0.026
44	3.67	0.17	0.032	(0.055)	0.006	0.026
45	3.75	0.17	0.032	(0.055)	0.006	0.026
46	3.83	0.20	0.038	(0.054)	0.007	0.031
47	3.92	0.20	0.038	(0.054)	0.007	0.031
48	4.00	0.20	0.038	(0.054)	0.007	0.031
49	4.08	0.20	0.038	(0.054)	0.007	0.031
50	4.17	0.20	0.038	(0.054)	0.007	0.031
51	4.25	0.20	0.038	(0.053)	0.007	0.031
52	4.33	0.23	0.045	(0.053)	0.008	0.037
53	4.42	0.23	0.045	(0.053)	0.008	0.037
54	4.50	0.23	0.045	(0.053)	0.008	0.037
55	4.58	0.23	0.045	(0.052)	0.008	0.037
56	4.67	0.23	0.045	(0.052)	0.008	0.037
57	4.75	0.23	0.045	(0.052)	0.008	0.037
58	4.83	0.27	0.051	(0.052)	0.009	0.042
59	4.92	0.27	0.051	(0.051)	0.009	0.042
60	5.00	0.27	0.051	(0.051)	0.009	0.042
61	5.08	0.20	0.038	(0.051)	0.007	0.031
62	5.17	0.20	0.038	(0.051)	0.007	0.031
63	5.25	0.20	0.038	(0.051)	0.007	0.031
64	5.33	0.23	0.045	(0.050)	0.008	0.037
65	5.42	0.23	0.045	(0.050)	0.008	0.037
66	5.50	0.23	0.045	(0.050)	0.008	0.037
67	5.58	0.27	0.051	(0.050)	0.009	0.042
68	5.67	0.27	0.051	(0.049)	0.009	0.042
69	5.75	0.27	0.051	(0.049)	0.009	0.042
70	5.83	0.27	0.051	(0.049)	0.009	0.042
71	5.92	0.27	0.051	(0.049)	0.009	0.042
72	6.00	0.27	0.051	(0.049)	0.009	0.042
73	6.08	0.30	0.058	(0.048)	0.010	0.047
74	6.17	0.30	0.058	(0.048)	0.010	0.047

75	6.25	0.30	0.058	(0.048)	0.010	0.047
76	6.33	0.30	0.058	(0.048)	0.010	0.047
77	6.42	0.30	0.058	(0.048)	0.010	0.047
78	6.50	0.30	0.058	(0.047)	0.010	0.047
79	6.58	0.33	0.064	(0.047)	0.012	0.052
80	6.67	0.33	0.064	(0.047)	0.012	0.052
81	6.75	0.33	0.064	(0.047)	0.012	0.052
82	6.83	0.33	0.064	(0.046)	0.012	0.052
83	6.92	0.33	0.064	(0.046)	0.012	0.052
84	7.00	0.33	0.064	(0.046)	0.012	0.052
85	7.08	0.33	0.064	(0.046)	0.012	0.052
86	7.17	0.33	0.064	(0.046)	0.012	0.052
87	7.25	0.33	0.064	(0.045)	0.012	0.052
88	7.33	0.37	0.070	(0.045)	0.013	0.058
89	7.42	0.37	0.070	(0.045)	0.013	0.058
90	7.50	0.37	0.070	(0.045)	0.013	0.058
91	7.58	0.40	0.077	(0.045)	0.014	0.063
92	7.67	0.40	0.077	(0.044)	0.014	0.063
93	7.75	0.40	0.077	(0.044)	0.014	0.063
94	7.83	0.43	0.083	(0.044)	0.015	0.068
95	7.92	0.43	0.083	(0.044)	0.015	0.068
96	8.00	0.43	0.083	(0.044)	0.015	0.068
97	8.08	0.50	0.096	(0.043)	0.017	0.079
98	8.17	0.50	0.096	(0.043)	0.017	0.079
99	8.25	0.50	0.096	(0.043)	0.017	0.079
100	8.33	0.50	0.096	(0.043)	0.017	0.079
101	8.42	0.50	0.096	(0.043)	0.017	0.079
102	8.50	0.50	0.096	(0.042)	0.017	0.079
103	8.58	0.53	0.102	(0.042)	0.018	0.084
104	8.67	0.53	0.102	(0.042)	0.018	0.084
105	8.75	0.53	0.102	(0.042)	0.018	0.084
106	8.83	0.57	0.109	(0.042)	0.020	0.089
107	8.92	0.57	0.109	(0.041)	0.020	0.089
108	9.00	0.57	0.109	(0.041)	0.020	0.089
109	9.08	0.63	0.122	(0.041)	0.022	0.100
110	9.17	0.63	0.122	(0.041)	0.022	0.100
111	9.25	0.63	0.122	(0.041)	0.022	0.100
112	9.33	0.67	0.128	(0.040)	0.023	0.105
113	9.42	0.67	0.128	(0.040)	0.023	0.105
114	9.50	0.67	0.128	(0.040)	0.023	0.105
115	9.58	0.70	0.134	(0.040)	0.024	0.110
116	9.67	0.70	0.134	(0.040)	0.024	0.110
117	9.75	0.70	0.134	(0.039)	0.024	0.110
118	9.83	0.73	0.141	(0.039)	0.025	0.115
119	9.92	0.73	0.141	(0.039)	0.025	0.115
120	10.00	0.73	0.141	(0.039)	0.025	0.115
121	10.08	0.50	0.096	(0.039)	0.017	0.079
122	10.17	0.50	0.096	(0.039)	0.017	0.079
123	10.25	0.50	0.096	(0.038)	0.017	0.079
124	10.33	0.50	0.096	(0.038)	0.017	0.079
125	10.42	0.50	0.096	(0.038)	0.017	0.079
126	10.50	0.50	0.096	(0.038)	0.017	0.079
127	10.58	0.67	0.128	(0.038)	0.023	0.105
128	10.67	0.67	0.128	(0.037)	0.023	0.105
129	10.75	0.67	0.128	(0.037)	0.023	0.105
130	10.83	0.67	0.128	(0.037)	0.023	0.105
131	10.92	0.67	0.128	(0.037)	0.023	0.105
132	11.00	0.67	0.128	(0.037)	0.023	0.105
133	11.08	0.63	0.122	(0.036)	0.022	0.100
134	11.17	0.63	0.122	(0.036)	0.022	0.100

135	11.25	0.63	0.122	(0.036)	0.022	0.100
136	11.33	0.63	0.122	(0.036)	0.022	0.100
137	11.42	0.63	0.122	(0.036)	0.022	0.100
138	11.50	0.63	0.122	(0.036)	0.022	0.100
139	11.58	0.57	0.109	(0.035)	0.020	0.089
140	11.67	0.57	0.109	(0.035)	0.020	0.089
141	11.75	0.57	0.109	(0.035)	0.020	0.089
142	11.83	0.60	0.115	(0.035)	0.021	0.094
143	11.92	0.60	0.115	(0.035)	0.021	0.094
144	12.00	0.60	0.115	(0.035)	0.021	0.094
145	12.08	0.83	0.160	(0.034)	0.029	0.131
146	12.17	0.83	0.160	(0.034)	0.029	0.131
147	12.25	0.83	0.160	(0.034)	0.029	0.131
148	12.33	0.87	0.166	(0.034)	0.030	0.136
149	12.42	0.87	0.166	(0.034)	0.030	0.136
150	12.50	0.87	0.166	(0.034)	0.030	0.136
151	12.58	0.93	0.179	(0.033)	0.032	0.147
152	12.67	0.93	0.179	(0.033)	0.032	0.147
153	12.75	0.93	0.179	(0.033)	0.032	0.147
154	12.83	0.97	0.186	0.033	(0.033)	0.153
155	12.92	0.97	0.186	0.033	(0.033)	0.153
156	13.00	0.97	0.186	0.033	(0.033)	0.153
157	13.08	1.13	0.218	0.032	(0.039)	0.185
158	13.17	1.13	0.218	0.032	(0.039)	0.185
159	13.25	1.13	0.218	0.032	(0.039)	0.186
160	13.33	1.13	0.218	0.032	(0.039)	0.186
161	13.42	1.13	0.218	0.032	(0.039)	0.186
162	13.50	1.13	0.218	0.032	(0.039)	0.186
163	13.58	0.77	0.147	(0.031)	0.026	0.121
164	13.67	0.77	0.147	(0.031)	0.026	0.121
165	13.75	0.77	0.147	(0.031)	0.026	0.121
166	13.83	0.77	0.147	(0.031)	0.026	0.121
167	13.92	0.77	0.147	(0.031)	0.026	0.121
168	14.00	0.77	0.147	(0.031)	0.026	0.121
169	14.08	0.90	0.173	0.030	(0.031)	0.142
170	14.17	0.90	0.173	0.030	(0.031)	0.143
171	14.25	0.90	0.173	0.030	(0.031)	0.143
172	14.33	0.87	0.166	(0.030)	0.030	0.136
173	14.42	0.87	0.166	0.030	(0.030)	0.137
174	14.50	0.87	0.166	0.030	(0.030)	0.137
175	14.58	0.87	0.166	0.030	(0.030)	0.137
176	14.67	0.87	0.166	0.029	(0.030)	0.137
177	14.75	0.87	0.166	0.029	(0.030)	0.137
178	14.83	0.83	0.160	(0.029)	0.029	0.131
179	14.92	0.83	0.160	(0.029)	0.029	0.131
180	15.00	0.83	0.160	0.029	(0.029)	0.131
181	15.08	0.80	0.154	(0.029)	0.028	0.126
182	15.17	0.80	0.154	(0.028)	0.028	0.126
183	15.25	0.80	0.154	(0.028)	0.028	0.126
184	15.33	0.77	0.147	(0.028)	0.026	0.121
185	15.42	0.77	0.147	(0.028)	0.026	0.121
186	15.50	0.77	0.147	(0.028)	0.026	0.121
187	15.58	0.63	0.122	(0.028)	0.022	0.100
188	15.67	0.63	0.122	(0.028)	0.022	0.100
189	15.75	0.63	0.122	(0.027)	0.022	0.100
190	15.83	0.63	0.122	(0.027)	0.022	0.100
191	15.92	0.63	0.122	(0.027)	0.022	0.100
192	16.00	0.63	0.122	(0.027)	0.022	0.100
193	16.08	0.13	0.026	(0.027)	0.005	0.021
194	16.17	0.13	0.026	(0.027)	0.005	0.021

195	16.25	0.13	0.026	(0.027)	0.005	0.021
196	16.33	0.13	0.026	(0.026)	0.005	0.021
197	16.42	0.13	0.026	(0.026)	0.005	0.021
198	16.50	0.13	0.026	(0.026)	0.005	0.021
199	16.58	0.10	0.019	(0.026)	0.003	0.016
200	16.67	0.10	0.019	(0.026)	0.003	0.016
201	16.75	0.10	0.019	(0.026)	0.003	0.016
202	16.83	0.10	0.019	(0.026)	0.003	0.016
203	16.92	0.10	0.019	(0.026)	0.003	0.016
204	17.00	0.10	0.019	(0.025)	0.003	0.016
205	17.08	0.17	0.032	(0.025)	0.006	0.026
206	17.17	0.17	0.032	(0.025)	0.006	0.026
207	17.25	0.17	0.032	(0.025)	0.006	0.026
208	17.33	0.17	0.032	(0.025)	0.006	0.026
209	17.42	0.17	0.032	(0.025)	0.006	0.026
210	17.50	0.17	0.032	(0.025)	0.006	0.026
211	17.58	0.17	0.032	(0.025)	0.006	0.026
212	17.67	0.17	0.032	(0.024)	0.006	0.026
213	17.75	0.17	0.032	(0.024)	0.006	0.026
214	17.83	0.13	0.026	(0.024)	0.005	0.021
215	17.92	0.13	0.026	(0.024)	0.005	0.021
216	18.00	0.13	0.026	(0.024)	0.005	0.021
217	18.08	0.13	0.026	(0.024)	0.005	0.021
218	18.17	0.13	0.026	(0.024)	0.005	0.021
219	18.25	0.13	0.026	(0.024)	0.005	0.021
220	18.33	0.13	0.026	(0.023)	0.005	0.021
221	18.42	0.13	0.026	(0.023)	0.005	0.021
222	18.50	0.13	0.026	(0.023)	0.005	0.021
223	18.58	0.10	0.019	(0.023)	0.003	0.016
224	18.67	0.10	0.019	(0.023)	0.003	0.016
225	18.75	0.10	0.019	(0.023)	0.003	0.016
226	18.83	0.07	0.013	(0.023)	0.002	0.010
227	18.92	0.07	0.013	(0.023)	0.002	0.010
228	19.00	0.07	0.013	(0.023)	0.002	0.010
229	19.08	0.10	0.019	(0.022)	0.003	0.016
230	19.17	0.10	0.019	(0.022)	0.003	0.016
231	19.25	0.10	0.019	(0.022)	0.003	0.016
232	19.33	0.13	0.026	(0.022)	0.005	0.021
233	19.42	0.13	0.026	(0.022)	0.005	0.021
234	19.50	0.13	0.026	(0.022)	0.005	0.021
235	19.58	0.10	0.019	(0.022)	0.003	0.016
236	19.67	0.10	0.019	(0.022)	0.003	0.016
237	19.75	0.10	0.019	(0.022)	0.003	0.016
238	19.83	0.07	0.013	(0.022)	0.002	0.010
239	19.92	0.07	0.013	(0.021)	0.002	0.010
240	20.00	0.07	0.013	(0.021)	0.002	0.010
241	20.08	0.10	0.019	(0.021)	0.003	0.016
242	20.17	0.10	0.019	(0.021)	0.003	0.016
243	20.25	0.10	0.019	(0.021)	0.003	0.016
244	20.33	0.10	0.019	(0.021)	0.003	0.016
245	20.42	0.10	0.019	(0.021)	0.003	0.016
246	20.50	0.10	0.019	(0.021)	0.003	0.016
247	20.58	0.10	0.019	(0.021)	0.003	0.016
248	20.67	0.10	0.019	(0.021)	0.003	0.016
249	20.75	0.10	0.019	(0.021)	0.003	0.016
250	20.83	0.07	0.013	(0.020)	0.002	0.010
251	20.92	0.07	0.013	(0.020)	0.002	0.010
252	21.00	0.07	0.013	(0.020)	0.002	0.010
253	21.08	0.10	0.019	(0.020)	0.003	0.016
254	21.17	0.10	0.019	(0.020)	0.003	0.016

255	21.25	0.10	0.019	(0.020)	0.003	0.016
256	21.33	0.07	0.013	(0.020)	0.002	0.010
257	21.42	0.07	0.013	(0.020)	0.002	0.010
258	21.50	0.07	0.013	(0.020)	0.002	0.010
259	21.58	0.10	0.019	(0.020)	0.003	0.016
260	21.67	0.10	0.019	(0.020)	0.003	0.016
261	21.75	0.10	0.019	(0.020)	0.003	0.016
262	21.83	0.07	0.013	(0.020)	0.002	0.010
263	21.92	0.07	0.013	(0.020)	0.002	0.010
264	22.00	0.07	0.013	(0.019)	0.002	0.010
265	22.08	0.10	0.019	(0.019)	0.003	0.016
266	22.17	0.10	0.019	(0.019)	0.003	0.016
267	22.25	0.10	0.019	(0.019)	0.003	0.016
268	22.33	0.07	0.013	(0.019)	0.002	0.010
269	22.42	0.07	0.013	(0.019)	0.002	0.010
270	22.50	0.07	0.013	(0.019)	0.002	0.010
271	22.58	0.07	0.013	(0.019)	0.002	0.010
272	22.67	0.07	0.013	(0.019)	0.002	0.010
273	22.75	0.07	0.013	(0.019)	0.002	0.010
274	22.83	0.07	0.013	(0.019)	0.002	0.010
275	22.92	0.07	0.013	(0.019)	0.002	0.010
276	23.00	0.07	0.013	(0.019)	0.002	0.010
277	23.08	0.07	0.013	(0.019)	0.002	0.010
278	23.17	0.07	0.013	(0.019)	0.002	0.010
279	23.25	0.07	0.013	(0.019)	0.002	0.010
280	23.33	0.07	0.013	(0.019)	0.002	0.010
281	23.42	0.07	0.013	(0.019)	0.002	0.010
282	23.50	0.07	0.013	(0.019)	0.002	0.010
283	23.58	0.07	0.013	(0.019)	0.002	0.010
284	23.67	0.07	0.013	(0.018)	0.002	0.010
285	23.75	0.07	0.013	(0.018)	0.002	0.010
286	23.83	0.07	0.013	(0.018)	0.002	0.010
287	23.92	0.07	0.013	(0.018)	0.002	0.010
288	24.00	0.07	0.013	(0.018)	0.002	0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 15.8

Flood volume = Effective rainfall 1.32(In)
times area 13.0(Ac.)/[(In)/(Ft.)] = 1.4(Ac.Ft)
Total soil loss = 0.28(In)
Total soil loss = 0.307(Ac.Ft)
Total rainfall = 1.60(In)
Flood volume = 62108.9 Cubic Feet
Total soil loss = 13393.2 Cubic Feet

Peak flow rate of this hydrograph = 2.438(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0005	0.07	Q	|	|	|	|
0+10	0.0014	0.13	Q	|	|	|	|
0+15	0.0023	0.14	Q	|	|	|	|
0+20	0.0035	0.17	Q	|	|	|	|
0+25	0.0049	0.20	Q	|	|	|	|

0+30	0.0063	0.21	Q	|	|	|	|
0+35	0.0077	0.21	Q	|	|	|	|
0+40	0.0091	0.21	Q	|	|	|	|
0+45	0.0106	0.21	Q	|	|	|	|
0+50	0.0122	0.24	Q	|	|	|	|
0+55	0.0141	0.27	VQ	|	|	|	|
1+ 0	0.0160	0.27	VQ	|	|	|	|
1+ 5	0.0176	0.24	Q	|	|	|	|
1+10	0.0191	0.21	Q	|	|	|	|
1+15	0.0205	0.21	Q	|	|	|	|
1+20	0.0219	0.21	Q	|	|	|	|
1+25	0.0234	0.21	Q	|	|	|	|
1+30	0.0248	0.21	Q	|	|	|	|
1+35	0.0262	0.21	Q	|	|	|	|
1+40	0.0276	0.21	Q	|	|	|	|
1+45	0.0290	0.21	Q	|	|	|	|
1+50	0.0307	0.24	Q	|	|	|	|
1+55	0.0326	0.27	VQ	|	|	|	|
2+ 0	0.0345	0.27	VQ	|	|	|	|
2+ 5	0.0363	0.28	|Q	|	|	|	|
2+10	0.0382	0.28	|Q	|	|	|	|
2+15	0.0401	0.28	|Q	|	|	|	|
2+20	0.0420	0.28	|Q	|	|	|	|
2+25	0.0439	0.28	|Q	|	|	|	|
2+30	0.0458	0.28	|Q	|	|	|	|
2+35	0.0480	0.31	|Q	|	|	|	|
2+40	0.0503	0.34	|Q	|	|	|	|
2+45	0.0527	0.34	|Q	|	|	|	|
2+50	0.0550	0.34	|Q	|	|	|	|
2+55	0.0574	0.34	|Q	|	|	|	|
3+ 0	0.0598	0.34	|Q	|	|	|	|
3+ 5	0.0621	0.34	|Q	|	|	|	|
3+10	0.0645	0.34	|Q	|	|	|	|
3+15	0.0669	0.34	|Q	|	|	|	|
3+20	0.0692	0.34	|Q	|	|	|	|
3+25	0.0716	0.34	|QV	|	|	|	|
3+30	0.0740	0.34	|QV	|	|	|	|
3+35	0.0763	0.34	|QV	|	|	|	|
3+40	0.0787	0.34	|QV	|	|	|	|
3+45	0.0811	0.34	|QV	|	|	|	|
3+50	0.0837	0.38	|QV	|	|	|	|
3+55	0.0865	0.41	|QV	|	|	|	|
4+ 0	0.0893	0.41	|QV	|	|	|	|
4+ 5	0.0922	0.41	|QV	|	|	|	|
4+10	0.0950	0.41	|QV	|	|	|	|
4+15	0.0979	0.41	|QV	|	|	|	|
4+20	0.1010	0.45	|QV	|	|	|	|
4+25	0.1042	0.48	|QV	|	|	|	|
4+30	0.1076	0.48	|Q V	|	|	|	|
4+35	0.1109	0.48	|Q V	|	|	|	|
4+40	0.1142	0.48	|Q V	|	|	|	|
4+45	0.1175	0.48	|Q V	|	|	|	|
4+50	0.1211	0.52	| QV	|	|	|	|
4+55	0.1248	0.54	| QV	|	|	|	|
5+ 0	0.1286	0.55	| QV	|	|	|	|
5+ 5	0.1319	0.48	|Q V	|	|	|	|
5+10	0.1348	0.42	|Q V	|	|	|	|
5+15	0.1377	0.41	|Q V	|	|	|	|
5+20	0.1408	0.45	|Q V	|	|	|	|
5+25	0.1440	0.48	|Q V	|	|	|	|

5+30	0.1473	0.48	Q V				
5+35	0.1509	0.52	Q V				
5+40	0.1547	0.54	Q V				
5+45	0.1584	0.55	Q V				
5+50	0.1622	0.55	Q V				
5+55	0.1660	0.55	Q V				
6+ 0	0.1698	0.55	Q V				
6+ 5	0.1739	0.59	Q V				
6+10	0.1781	0.61	Q V				
6+15	0.1823	0.62	Q V				
6+20	0.1866	0.62	Q V				
6+25	0.1909	0.62	Q V				
6+30	0.1951	0.62	Q V				
6+35	0.1996	0.66	Q V				
6+40	0.2043	0.68	Q V				
6+45	0.2091	0.69	Q V				
6+50	0.2138	0.69	Q V				
6+55	0.2186	0.69	Q V				
7+ 0	0.2233	0.69	Q V				
7+ 5	0.2280	0.69	Q V				
7+10	0.2328	0.69	Q V				
7+15	0.2375	0.69	Q V				
7+20	0.2425	0.72	Q V				
7+25	0.2477	0.75	Q V				
7+30	0.2529	0.76	Q V				
7+35	0.2583	0.79	Q V				
7+40	0.2640	0.82	Q V				
7+45	0.2697	0.82	Q V				
7+50	0.2756	0.86	Q V				
7+55	0.2817	0.89	Q V				
8+ 0	0.2879	0.89	Q V				
8+ 5	0.2945	0.97	Q V				
8+10	0.3015	1.02	Q V				
8+15	0.3086	1.03	Q V				
8+20	0.3157	1.03	Q V				
8+25	0.3229	1.03	Q V				
8+30	0.3300	1.03	Q V				
8+35	0.3373	1.07	Q V				
8+40	0.3449	1.10	Q V				
8+45	0.3524	1.10	Q V				
8+50	0.3603	1.14	Q V				
8+55	0.3683	1.16	Q V				
9+ 0	0.3763	1.17	Q V				
9+ 5	0.3849	1.24	Q V				
9+10	0.3938	1.30	Q V				
9+15	0.4028	1.30	Q V				
9+20	0.4120	1.34	Q V				
9+25	0.4215	1.37	Q V				
9+30	0.4309	1.37	Q V				
9+35	0.4407	1.41	Q V				
9+40	0.4506	1.44	Q V				
9+45	0.4605	1.44	Q V				
9+50	0.4707	1.48	Q V				
9+55	0.4811	1.51	Q V				
10+ 0	0.4915	1.51	Q V				
10+ 5	0.5002	1.26	Q V				
10+10	0.5076	1.07	Q V				
10+15	0.5147	1.04	Q V				
10+20	0.5218	1.03	Q V				
10+25	0.5289	1.03	Q V				

10+30	0.5360	1.03	Q	V			
10+35	0.5444	1.21	Q	V			
10+40	0.5537	1.35	Q	V			
10+45	0.5631	1.37	Q	V			
10+50	0.5726	1.38	Q	V			
10+55	0.5821	1.38	Q	V			
11+ 0	0.5916	1.38	Q	V			
11+ 5	0.6008	1.34	Q	V			
11+10	0.6098	1.31	Q	V			
11+15	0.6188	1.31	Q	V			
11+20	0.6278	1.31	Q	V			
11+25	0.6368	1.31	Q	V			
11+30	0.6458	1.31	Q	V			
11+35	0.6543	1.23	Q	V			
11+40	0.6625	1.18	Q	V			
11+45	0.6705	1.17	Q	V			
11+50	0.6788	1.21	Q	V			
11+55	0.6873	1.23	Q	V			
12+ 0	0.6958	1.24	Q	V			
12+ 5	0.7061	1.49	Q	V			
12+10	0.7177	1.68	Q	V			
12+15	0.7295	1.71	Q	V			
12+20	0.7416	1.76	Q	V			
12+25	0.7539	1.78	Q	V			
12+30	0.7662	1.79	Q	V			
12+35	0.7790	1.86	Q	V			
12+40	0.7922	1.91	Q	V			
12+45	0.8054	1.92	Q	V			
12+50	0.8190	1.97	Q	V			
12+55	0.8327	2.00	Q	V			
13+ 0	0.8465	2.00	Q	V			
13+ 5	0.8619	2.23	Q	V			
13+10	0.8784	2.40	Q	V			
13+15	0.8951	2.42	Q	V			
13+20	0.9118	2.43	Q	V			
13+25	0.9286	2.44	Q	V			
13+30	0.9454	2.44	Q	V			
13+35	0.9591	1.99	Q	V			
13+40	0.9705	1.65	Q	V			
13+45	0.9814	1.60	Q	V			
13+50	0.9923	1.58	Q	V			
13+55	1.0032	1.58	Q	V			
14+ 0	1.0141	1.58	Q	V			
14+ 5	1.0261	1.73	Q	V			
14+10	1.0388	1.84	Q	V			
14+15	1.0516	1.86	Q	V			
14+20	1.0642	1.83	Q	V			
14+25	1.0766	1.80	Q	V			
14+30	1.0889	1.79	Q	V			
14+35	1.1012	1.79	Q	V			
14+40	1.1136	1.80	Q	V			
14+45	1.1260	1.80	Q	V			
14+50	1.1381	1.76	Q	V			
14+55	1.1500	1.73	Q	V			
15+ 0	1.1618	1.72	Q	V			
15+ 5	1.1734	1.68	Q	V			
15+10	1.1848	1.66	Q	V			
15+15	1.1962	1.65	Q	V			
15+20	1.2073	1.61	Q	V			
15+25	1.2183	1.59	Q	V			

15+30	1.2292	1.58	| Q	|	|	| V	|
15+35	1.2391	1.44	| Q	|	|	| V	|
15+40	1.2482	1.33	| Q	|	|	| V	|
15+45	1.2573	1.31	| Q	|	|	| V	|
15+50	1.2663	1.31	| Q	|	|	| V	|
15+55	1.2753	1.31	| Q	|	|	| V	|
16+ 0	1.2843	1.31	| Q	|	|	| V	|
16+ 5	1.2895	0.76	| Q	|	|	| V	|
16+10	1.2920	0.36	|Q	|	|	| V	|
16+15	1.2940	0.29	|Q	|	|	| V	|
16+20	1.2959	0.28	|Q	|	|	| V	|
16+25	1.2978	0.28	|Q	|	|	| V	|
16+30	1.2997	0.28	|Q	|	|	| V	|
16+35	1.3013	0.24	Q	|	|	| V	|
16+40	1.3028	0.21	Q	|	|	| V	|
16+45	1.3042	0.21	Q	|	|	| V	|
16+50	1.3056	0.21	Q	|	|	| V	|
16+55	1.3070	0.21	Q	|	|	| V	|
17+ 0	1.3085	0.21	Q	|	|	| V	|
17+ 5	1.3104	0.28	|Q	|	|	| V	|
17+10	1.3127	0.33	|Q	|	|	| V	|
17+15	1.3150	0.34	|Q	|	|	| V	|
17+20	1.3174	0.34	|Q	|	|	| V	|
17+25	1.3198	0.34	|Q	|	|	| V	|
17+30	1.3221	0.34	|Q	|	|	| V	|
17+35	1.3245	0.34	|Q	|	|	| V	|
17+40	1.3269	0.34	|Q	|	|	| V	|
17+45	1.3292	0.34	|Q	|	|	| V	|
17+50	1.3314	0.31	|Q	|	|	| V	|
17+55	1.3333	0.28	|Q	|	|	| V	|
18+ 0	1.3352	0.28	|Q	|	|	| V	|
18+ 5	1.3371	0.28	|Q	|	|	| V	|
18+10	1.3390	0.28	|Q	|	|	| V	|
18+15	1.3409	0.28	|Q	|	|	| V	|
18+20	1.3428	0.28	|Q	|	|	| V	|
18+25	1.3447	0.28	|Q	|	|	| V	|
18+30	1.3466	0.28	|Q	|	|	| V	|
18+35	1.3482	0.24	Q	|	|	| V	|
18+40	1.3497	0.21	Q	|	|	| V	|
18+45	1.3511	0.21	Q	|	|	| V	|
18+50	1.3523	0.17	Q	|	|	| V	|
18+55	1.3533	0.14	Q	|	|	| V	|
19+ 0	1.3542	0.14	Q	|	|	| V	|
19+ 5	1.3554	0.17	Q	|	|	| V	|
19+10	1.3568	0.20	Q	|	|	| V	|
19+15	1.3582	0.21	Q	|	|	| V	|
19+20	1.3599	0.24	Q	|	|	| V	|
19+25	1.3617	0.27	|Q	|	|	| V	|
19+30	1.3636	0.27	|Q	|	|	| V	|
19+35	1.3653	0.24	Q	|	|	| V	|
19+40	1.3667	0.21	Q	|	|	| V	|
19+45	1.3682	0.21	Q	|	|	| V	|
19+50	1.3693	0.17	Q	|	|	| V	|
19+55	1.3703	0.14	Q	|	|	| V	|
20+ 0	1.3713	0.14	Q	|	|	| V	|
20+ 5	1.3725	0.17	Q	|	|	| V	|
20+10	1.3739	0.20	Q	|	|	| V	|
20+15	1.3753	0.21	Q	|	|	| V	|
20+20	1.3767	0.21	Q	|	|	| V	|
20+25	1.3781	0.21	Q	|	|	| V	|

20+30	1.3795	0.21	Q	|	|	|	V |
20+35	1.3810	0.21	Q	|	|	|	V |
20+40	1.3824	0.21	Q	|	|	|	V |
20+45	1.3838	0.21	Q	|	|	|	V |
20+50	1.3850	0.17	Q	|	|	|	V |
20+55	1.3860	0.14	Q	|	|	|	V |
21+ 0	1.3869	0.14	Q	|	|	|	V |
21+ 5	1.3881	0.17	Q	|	|	|	V |
21+10	1.3895	0.20	Q	|	|	|	V |
21+15	1.3909	0.21	Q	|	|	|	V|
21+20	1.3921	0.17	Q	|	|	|	V|
21+25	1.3931	0.14	Q	|	|	|	V|
21+30	1.3940	0.14	Q	|	|	|	V|
21+35	1.3952	0.17	Q	|	|	|	V|
21+40	1.3966	0.20	Q	|	|	|	V|
21+45	1.3980	0.21	Q	|	|	|	V|
21+50	1.3992	0.17	Q	|	|	|	V|
21+55	1.4002	0.14	Q	|	|	|	V|
22+ 0	1.4011	0.14	Q	|	|	|	V|
22+ 5	1.4023	0.17	Q	|	|	|	V|
22+10	1.4037	0.20	Q	|	|	|	V|
22+15	1.4051	0.21	Q	|	|	|	V|
22+20	1.4063	0.17	Q	|	|	|	V|
22+25	1.4073	0.14	Q	|	|	|	V|
22+30	1.4082	0.14	Q	|	|	|	V|
22+35	1.4092	0.14	Q	|	|	|	V|
22+40	1.4101	0.14	Q	|	|	|	V|
22+45	1.4111	0.14	Q	|	|	|	V|
22+50	1.4120	0.14	Q	|	|	|	V|
22+55	1.4130	0.14	Q	|	|	|	V|
23+ 0	1.4139	0.14	Q	|	|	|	V|
23+ 5	1.4149	0.14	Q	|	|	|	V|
23+10	1.4158	0.14	Q	|	|	|	V|
23+15	1.4168	0.14	Q	|	|	|	V|
23+20	1.4177	0.14	Q	|	|	|	V|
23+25	1.4187	0.14	Q	|	|	|	V|
23+30	1.4196	0.14	Q	|	|	|	V|
23+35	1.4205	0.14	Q	|	|	|	V|
23+40	1.4215	0.14	Q	|	|	|	V|
23+45	1.4224	0.14	Q	|	|	|	V|
23+50	1.4234	0.14	Q	|	|	|	V|
23+55	1.4243	0.14	Q	|	|	|	V|
24+ 0	1.4253	0.14	Q	|	|	|	V|
24+ 5	1.4257	0.07	Q	|	|	|	V|
24+10	1.4258	0.01	Q	|	|	|	V|
24+15	1.4258	0.00	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750bpa24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
Proposed - Area A
100 year 24 hour

Drainage Area = 13.00(Ac.) = 0.020 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 13.00(Ac.) = 0.020 Sq. Mi.
Length along longest watercourse = 1009.00(Ft.)
Length along longest watercourse measured to centroid = 370.00(Ft.)
Length along longest watercourse = 0.191 Mi.
Length along longest watercourse measured to centroid = 0.070 Mi.
Difference in elevation = 12.70(Ft.)
Slope along watercourse = 66.4579 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.031 Hr.
Lag time = 1.89 Min.
25% of lag time = 0.47 Min.
40% of lag time = 0.76 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
13.00	1.60	20.80

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
13.00	4.00	52.00

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
13.000	69.00	0.900

Total Area Entered = 13.00(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	84.4	0.194	0.900	0.037	1.000	0.037
					Sum (F) =	0.037

Area averaged mean soil loss (F) (In/Hr) = 0.037
Minimum soil loss rate ((In/Hr)) = 0.018
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.180

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	264.610	52.732	6.909
2	0.167	529.220	39.165	5.131
3	0.250	793.831	6.567	0.860
4	0.333	1058.441	1.536	0.201
			Sum = 100.000	Sum= 13.102

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.065)		0.006	0.026
2	0.17	0.07	0.032	(0.065)		0.006	0.026
3	0.25	0.07	0.032	(0.065)		0.006	0.026
4	0.33	0.10	0.048	(0.065)		0.009	0.039
5	0.42	0.10	0.048	(0.064)		0.009	0.039
6	0.50	0.10	0.048	(0.064)		0.009	0.039
7	0.58	0.10	0.048	(0.064)		0.009	0.039
8	0.67	0.10	0.048	(0.064)		0.009	0.039
9	0.75	0.10	0.048	(0.063)		0.009	0.039
10	0.83	0.13	0.064	(0.063)		0.012	0.052
11	0.92	0.13	0.064	(0.063)		0.012	0.052
12	1.00	0.13	0.064	(0.063)		0.012	0.052
13	1.08	0.10	0.048	(0.062)		0.009	0.039
14	1.17	0.10	0.048	(0.062)		0.009	0.039
15	1.25	0.10	0.048	(0.062)		0.009	0.039

16	1.33	0.10	0.048	(0.062)	0.009	0.039
17	1.42	0.10	0.048	(0.061)	0.009	0.039
18	1.50	0.10	0.048	(0.061)	0.009	0.039
19	1.58	0.10	0.048	(0.061)	0.009	0.039
20	1.67	0.10	0.048	(0.061)	0.009	0.039
21	1.75	0.10	0.048	(0.060)	0.009	0.039
22	1.83	0.13	0.064	(0.060)	0.012	0.052
23	1.92	0.13	0.064	(0.060)	0.012	0.052
24	2.00	0.13	0.064	(0.060)	0.012	0.052
25	2.08	0.13	0.064	(0.059)	0.012	0.052
26	2.17	0.13	0.064	(0.059)	0.012	0.052
27	2.25	0.13	0.064	(0.059)	0.012	0.052
28	2.33	0.13	0.064	(0.059)	0.012	0.052
29	2.42	0.13	0.064	(0.058)	0.012	0.052
30	2.50	0.13	0.064	(0.058)	0.012	0.052
31	2.58	0.17	0.080	(0.058)	0.014	0.066
32	2.67	0.17	0.080	(0.058)	0.014	0.066
33	2.75	0.17	0.080	(0.057)	0.014	0.066
34	2.83	0.17	0.080	(0.057)	0.014	0.066
35	2.92	0.17	0.080	(0.057)	0.014	0.066
36	3.00	0.17	0.080	(0.057)	0.014	0.066
37	3.08	0.17	0.080	(0.057)	0.014	0.066
38	3.17	0.17	0.080	(0.056)	0.014	0.066
39	3.25	0.17	0.080	(0.056)	0.014	0.066
40	3.33	0.17	0.080	(0.056)	0.014	0.066
41	3.42	0.17	0.080	(0.056)	0.014	0.066
42	3.50	0.17	0.080	(0.055)	0.014	0.066
43	3.58	0.17	0.080	(0.055)	0.014	0.066
44	3.67	0.17	0.080	(0.055)	0.014	0.066
45	3.75	0.17	0.080	(0.055)	0.014	0.066
46	3.83	0.20	0.096	(0.054)	0.017	0.079
47	3.92	0.20	0.096	(0.054)	0.017	0.079
48	4.00	0.20	0.096	(0.054)	0.017	0.079
49	4.08	0.20	0.096	(0.054)	0.017	0.079
50	4.17	0.20	0.096	(0.054)	0.017	0.079
51	4.25	0.20	0.096	(0.053)	0.017	0.079
52	4.33	0.23	0.112	(0.053)	0.020	0.092
53	4.42	0.23	0.112	(0.053)	0.020	0.092
54	4.50	0.23	0.112	(0.053)	0.020	0.092
55	4.58	0.23	0.112	(0.052)	0.020	0.092
56	4.67	0.23	0.112	(0.052)	0.020	0.092
57	4.75	0.23	0.112	(0.052)	0.020	0.092
58	4.83	0.27	0.128	(0.052)	0.023	0.105
59	4.92	0.27	0.128	(0.051)	0.023	0.105
60	5.00	0.27	0.128	(0.051)	0.023	0.105
61	5.08	0.20	0.096	(0.051)	0.017	0.079
62	5.17	0.20	0.096	(0.051)	0.017	0.079
63	5.25	0.20	0.096	(0.051)	0.017	0.079
64	5.33	0.23	0.112	(0.050)	0.020	0.092
65	5.42	0.23	0.112	(0.050)	0.020	0.092
66	5.50	0.23	0.112	(0.050)	0.020	0.092
67	5.58	0.27	0.128	(0.050)	0.023	0.105
68	5.67	0.27	0.128	(0.049)	0.023	0.105
69	5.75	0.27	0.128	(0.049)	0.023	0.105
70	5.83	0.27	0.128	(0.049)	0.023	0.105
71	5.92	0.27	0.128	(0.049)	0.023	0.105
72	6.00	0.27	0.128	(0.049)	0.023	0.105
73	6.08	0.30	0.144	(0.048)	0.026	0.118
74	6.17	0.30	0.144	(0.048)	0.026	0.118
75	6.25	0.30	0.144	(0.048)	0.026	0.118

76	6.33	0.30	0.144	(0.048)	0.026	0.118
77	6.42	0.30	0.144	(0.048)	0.026	0.118
78	6.50	0.30	0.144	(0.047)	0.026	0.118
79	6.58	0.33	0.160	(0.047)	0.029	0.131
80	6.67	0.33	0.160	(0.047)	0.029	0.131
81	6.75	0.33	0.160	(0.047)	0.029	0.131
82	6.83	0.33	0.160	(0.046)	0.029	0.131
83	6.92	0.33	0.160	(0.046)	0.029	0.131
84	7.00	0.33	0.160	(0.046)	0.029	0.131
85	7.08	0.33	0.160	(0.046)	0.029	0.131
86	7.17	0.33	0.160	(0.046)	0.029	0.131
87	7.25	0.33	0.160	(0.045)	0.029	0.131
88	7.33	0.37	0.176	(0.045)	0.032	0.144
89	7.42	0.37	0.176	(0.045)	0.032	0.144
90	7.50	0.37	0.176	(0.045)	0.032	0.144
91	7.58	0.40	0.192	(0.045)	0.035	0.157
92	7.67	0.40	0.192	(0.044)	0.035	0.157
93	7.75	0.40	0.192	(0.044)	0.035	0.157
94	7.83	0.43	0.208	(0.044)	0.037	0.171
95	7.92	0.43	0.208	(0.044)	0.037	0.171
96	8.00	0.43	0.208	(0.044)	0.037	0.171
97	8.08	0.50	0.240	(0.043)	0.043	0.197
98	8.17	0.50	0.240	0.043	(0.043)	0.197
99	8.25	0.50	0.240	0.043	(0.043)	0.197
100	8.33	0.50	0.240	0.043	(0.043)	0.197
101	8.42	0.50	0.240	0.043	(0.043)	0.197
102	8.50	0.50	0.240	0.042	(0.043)	0.198
103	8.58	0.53	0.256	0.042	(0.046)	0.214
104	8.67	0.53	0.256	0.042	(0.046)	0.214
105	8.75	0.53	0.256	0.042	(0.046)	0.214
106	8.83	0.57	0.272	0.042	(0.049)	0.230
107	8.92	0.57	0.272	0.041	(0.049)	0.231
108	9.00	0.57	0.272	0.041	(0.049)	0.231
109	9.08	0.63	0.304	0.041	(0.055)	0.263
110	9.17	0.63	0.304	0.041	(0.055)	0.263
111	9.25	0.63	0.304	0.041	(0.055)	0.263
112	9.33	0.67	0.320	0.040	(0.058)	0.280
113	9.42	0.67	0.320	0.040	(0.058)	0.280
114	9.50	0.67	0.320	0.040	(0.058)	0.280
115	9.58	0.70	0.336	0.040	(0.060)	0.296
116	9.67	0.70	0.336	0.040	(0.060)	0.296
117	9.75	0.70	0.336	0.039	(0.060)	0.297
118	9.83	0.73	0.352	0.039	(0.063)	0.313
119	9.92	0.73	0.352	0.039	(0.063)	0.313
120	10.00	0.73	0.352	0.039	(0.063)	0.313
121	10.08	0.50	0.240	0.039	(0.043)	0.201
122	10.17	0.50	0.240	0.039	(0.043)	0.201
123	10.25	0.50	0.240	0.038	(0.043)	0.202
124	10.33	0.50	0.240	0.038	(0.043)	0.202
125	10.42	0.50	0.240	0.038	(0.043)	0.202
126	10.50	0.50	0.240	0.038	(0.043)	0.202
127	10.58	0.67	0.320	0.038	(0.058)	0.282
128	10.67	0.67	0.320	0.037	(0.058)	0.283
129	10.75	0.67	0.320	0.037	(0.058)	0.283
130	10.83	0.67	0.320	0.037	(0.058)	0.283
131	10.92	0.67	0.320	0.037	(0.058)	0.283
132	11.00	0.67	0.320	0.037	(0.058)	0.283
133	11.08	0.63	0.304	0.036	(0.055)	0.267
134	11.17	0.63	0.304	0.036	(0.055)	0.268
135	11.25	0.63	0.304	0.036	(0.055)	0.268

136	11.33	0.63	0.304	0.036	(0.055)	0.268
137	11.42	0.63	0.304	0.036	(0.055)	0.268
138	11.50	0.63	0.304	0.036	(0.055)	0.268
139	11.58	0.57	0.272	0.035	(0.049)	0.237
140	11.67	0.57	0.272	0.035	(0.049)	0.237
141	11.75	0.57	0.272	0.035	(0.049)	0.237
142	11.83	0.60	0.288	0.035	(0.052)	0.253
143	11.92	0.60	0.288	0.035	(0.052)	0.253
144	12.00	0.60	0.288	0.035	(0.052)	0.253
145	12.08	0.83	0.400	0.034	(0.072)	0.366
146	12.17	0.83	0.400	0.034	(0.072)	0.366
147	12.25	0.83	0.400	0.034	(0.072)	0.366
148	12.33	0.87	0.416	0.034	(0.075)	0.382
149	12.42	0.87	0.416	0.034	(0.075)	0.382
150	12.50	0.87	0.416	0.034	(0.075)	0.382
151	12.58	0.93	0.448	0.033	(0.081)	0.415
152	12.67	0.93	0.448	0.033	(0.081)	0.415
153	12.75	0.93	0.448	0.033	(0.081)	0.415
154	12.83	0.97	0.464	0.033	(0.084)	0.431
155	12.92	0.97	0.464	0.033	(0.084)	0.431
156	13.00	0.97	0.464	0.033	(0.084)	0.431
157	13.08	1.13	0.544	0.032	(0.098)	0.512
158	13.17	1.13	0.544	0.032	(0.098)	0.512
159	13.25	1.13	0.544	0.032	(0.098)	0.512
160	13.33	1.13	0.544	0.032	(0.098)	0.512
161	13.42	1.13	0.544	0.032	(0.098)	0.512
162	13.50	1.13	0.544	0.032	(0.098)	0.512
163	13.58	0.77	0.368	0.031	(0.066)	0.337
164	13.67	0.77	0.368	0.031	(0.066)	0.337
165	13.75	0.77	0.368	0.031	(0.066)	0.337
166	13.83	0.77	0.368	0.031	(0.066)	0.337
167	13.92	0.77	0.368	0.031	(0.066)	0.337
168	14.00	0.77	0.368	0.031	(0.066)	0.337
169	14.08	0.90	0.432	0.030	(0.078)	0.402
170	14.17	0.90	0.432	0.030	(0.078)	0.402
171	14.25	0.90	0.432	0.030	(0.078)	0.402
172	14.33	0.87	0.416	0.030	(0.075)	0.386
173	14.42	0.87	0.416	0.030	(0.075)	0.386
174	14.50	0.87	0.416	0.030	(0.075)	0.386
175	14.58	0.87	0.416	0.030	(0.075)	0.386
176	14.67	0.87	0.416	0.029	(0.075)	0.387
177	14.75	0.87	0.416	0.029	(0.075)	0.387
178	14.83	0.83	0.400	0.029	(0.072)	0.371
179	14.92	0.83	0.400	0.029	(0.072)	0.371
180	15.00	0.83	0.400	0.029	(0.072)	0.371
181	15.08	0.80	0.384	0.029	(0.069)	0.355
182	15.17	0.80	0.384	0.028	(0.069)	0.356
183	15.25	0.80	0.384	0.028	(0.069)	0.356
184	15.33	0.77	0.368	0.028	(0.066)	0.340
185	15.42	0.77	0.368	0.028	(0.066)	0.340
186	15.50	0.77	0.368	0.028	(0.066)	0.340
187	15.58	0.63	0.304	0.028	(0.055)	0.276
188	15.67	0.63	0.304	0.028	(0.055)	0.276
189	15.75	0.63	0.304	0.027	(0.055)	0.277
190	15.83	0.63	0.304	0.027	(0.055)	0.277
191	15.92	0.63	0.304	0.027	(0.055)	0.277
192	16.00	0.63	0.304	0.027	(0.055)	0.277
193	16.08	0.13	0.064	(0.027)	0.012	0.052
194	16.17	0.13	0.064	(0.027)	0.012	0.052
195	16.25	0.13	0.064	(0.027)	0.012	0.052

196	16.33	0.13	0.064	(0.026)	0.012	0.052
197	16.42	0.13	0.064	(0.026)	0.012	0.052
198	16.50	0.13	0.064	(0.026)	0.012	0.052
199	16.58	0.10	0.048	(0.026)	0.009	0.039
200	16.67	0.10	0.048	(0.026)	0.009	0.039
201	16.75	0.10	0.048	(0.026)	0.009	0.039
202	16.83	0.10	0.048	(0.026)	0.009	0.039
203	16.92	0.10	0.048	(0.026)	0.009	0.039
204	17.00	0.10	0.048	(0.025)	0.009	0.039
205	17.08	0.17	0.080	(0.025)	0.014	0.066
206	17.17	0.17	0.080	(0.025)	0.014	0.066
207	17.25	0.17	0.080	(0.025)	0.014	0.066
208	17.33	0.17	0.080	(0.025)	0.014	0.066
209	17.42	0.17	0.080	(0.025)	0.014	0.066
210	17.50	0.17	0.080	(0.025)	0.014	0.066
211	17.58	0.17	0.080	(0.025)	0.014	0.066
212	17.67	0.17	0.080	(0.024)	0.014	0.066
213	17.75	0.17	0.080	(0.024)	0.014	0.066
214	17.83	0.13	0.064	(0.024)	0.012	0.052
215	17.92	0.13	0.064	(0.024)	0.012	0.052
216	18.00	0.13	0.064	(0.024)	0.012	0.052
217	18.08	0.13	0.064	(0.024)	0.012	0.052
218	18.17	0.13	0.064	(0.024)	0.012	0.052
219	18.25	0.13	0.064	(0.024)	0.012	0.052
220	18.33	0.13	0.064	(0.023)	0.012	0.052
221	18.42	0.13	0.064	(0.023)	0.012	0.052
222	18.50	0.13	0.064	(0.023)	0.012	0.052
223	18.58	0.10	0.048	(0.023)	0.009	0.039
224	18.67	0.10	0.048	(0.023)	0.009	0.039
225	18.75	0.10	0.048	(0.023)	0.009	0.039
226	18.83	0.07	0.032	(0.023)	0.006	0.026
227	18.92	0.07	0.032	(0.023)	0.006	0.026
228	19.00	0.07	0.032	(0.023)	0.006	0.026
229	19.08	0.10	0.048	(0.022)	0.009	0.039
230	19.17	0.10	0.048	(0.022)	0.009	0.039
231	19.25	0.10	0.048	(0.022)	0.009	0.039
232	19.33	0.13	0.064	(0.022)	0.012	0.052
233	19.42	0.13	0.064	(0.022)	0.012	0.052
234	19.50	0.13	0.064	(0.022)	0.012	0.052
235	19.58	0.10	0.048	(0.022)	0.009	0.039
236	19.67	0.10	0.048	(0.022)	0.009	0.039
237	19.75	0.10	0.048	(0.022)	0.009	0.039
238	19.83	0.07	0.032	(0.022)	0.006	0.026
239	19.92	0.07	0.032	(0.021)	0.006	0.026
240	20.00	0.07	0.032	(0.021)	0.006	0.026
241	20.08	0.10	0.048	(0.021)	0.009	0.039
242	20.17	0.10	0.048	(0.021)	0.009	0.039
243	20.25	0.10	0.048	(0.021)	0.009	0.039
244	20.33	0.10	0.048	(0.021)	0.009	0.039
245	20.42	0.10	0.048	(0.021)	0.009	0.039
246	20.50	0.10	0.048	(0.021)	0.009	0.039
247	20.58	0.10	0.048	(0.021)	0.009	0.039
248	20.67	0.10	0.048	(0.021)	0.009	0.039
249	20.75	0.10	0.048	(0.021)	0.009	0.039
250	20.83	0.07	0.032	(0.020)	0.006	0.026
251	20.92	0.07	0.032	(0.020)	0.006	0.026
252	21.00	0.07	0.032	(0.020)	0.006	0.026
253	21.08	0.10	0.048	(0.020)	0.009	0.039
254	21.17	0.10	0.048	(0.020)	0.009	0.039
255	21.25	0.10	0.048	(0.020)	0.009	0.039

256	21.33	0.07	0.032	(0.020)	0.006	0.026
257	21.42	0.07	0.032	(0.020)	0.006	0.026
258	21.50	0.07	0.032	(0.020)	0.006	0.026
259	21.58	0.10	0.048	(0.020)	0.009	0.039
260	21.67	0.10	0.048	(0.020)	0.009	0.039
261	21.75	0.10	0.048	(0.020)	0.009	0.039
262	21.83	0.07	0.032	(0.020)	0.006	0.026
263	21.92	0.07	0.032	(0.020)	0.006	0.026
264	22.00	0.07	0.032	(0.019)	0.006	0.026
265	22.08	0.10	0.048	(0.019)	0.009	0.039
266	22.17	0.10	0.048	(0.019)	0.009	0.039
267	22.25	0.10	0.048	(0.019)	0.009	0.039
268	22.33	0.07	0.032	(0.019)	0.006	0.026
269	22.42	0.07	0.032	(0.019)	0.006	0.026
270	22.50	0.07	0.032	(0.019)	0.006	0.026
271	22.58	0.07	0.032	(0.019)	0.006	0.026
272	22.67	0.07	0.032	(0.019)	0.006	0.026
273	22.75	0.07	0.032	(0.019)	0.006	0.026
274	22.83	0.07	0.032	(0.019)	0.006	0.026
275	22.92	0.07	0.032	(0.019)	0.006	0.026
276	23.00	0.07	0.032	(0.019)	0.006	0.026
277	23.08	0.07	0.032	(0.019)	0.006	0.026
278	23.17	0.07	0.032	(0.019)	0.006	0.026
279	23.25	0.07	0.032	(0.019)	0.006	0.026
280	23.33	0.07	0.032	(0.019)	0.006	0.026
281	23.42	0.07	0.032	(0.019)	0.006	0.026
282	23.50	0.07	0.032	(0.019)	0.006	0.026
283	23.58	0.07	0.032	(0.019)	0.006	0.026
284	23.67	0.07	0.032	(0.018)	0.006	0.026
285	23.75	0.07	0.032	(0.018)	0.006	0.026
286	23.83	0.07	0.032	(0.018)	0.006	0.026
287	23.92	0.07	0.032	(0.018)	0.006	0.026
288	24.00	0.07	0.032	(0.018)	0.006	0.026

(Loss Rate Not Used)

Sum = 100.0 Sum = 42.1

Flood volume = Effective rainfall 3.51(In)
times area 13.0(Ac.)/[(In)/(Ft.)] = 3.8(Ac.Ft)
Total soil loss = 0.49(In)
Total soil loss = 0.536(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 165421.6 Cubic Feet
Total soil loss = 23333.6 Cubic Feet

Peak flow rate of this hydrograph = 6.716(CFS)

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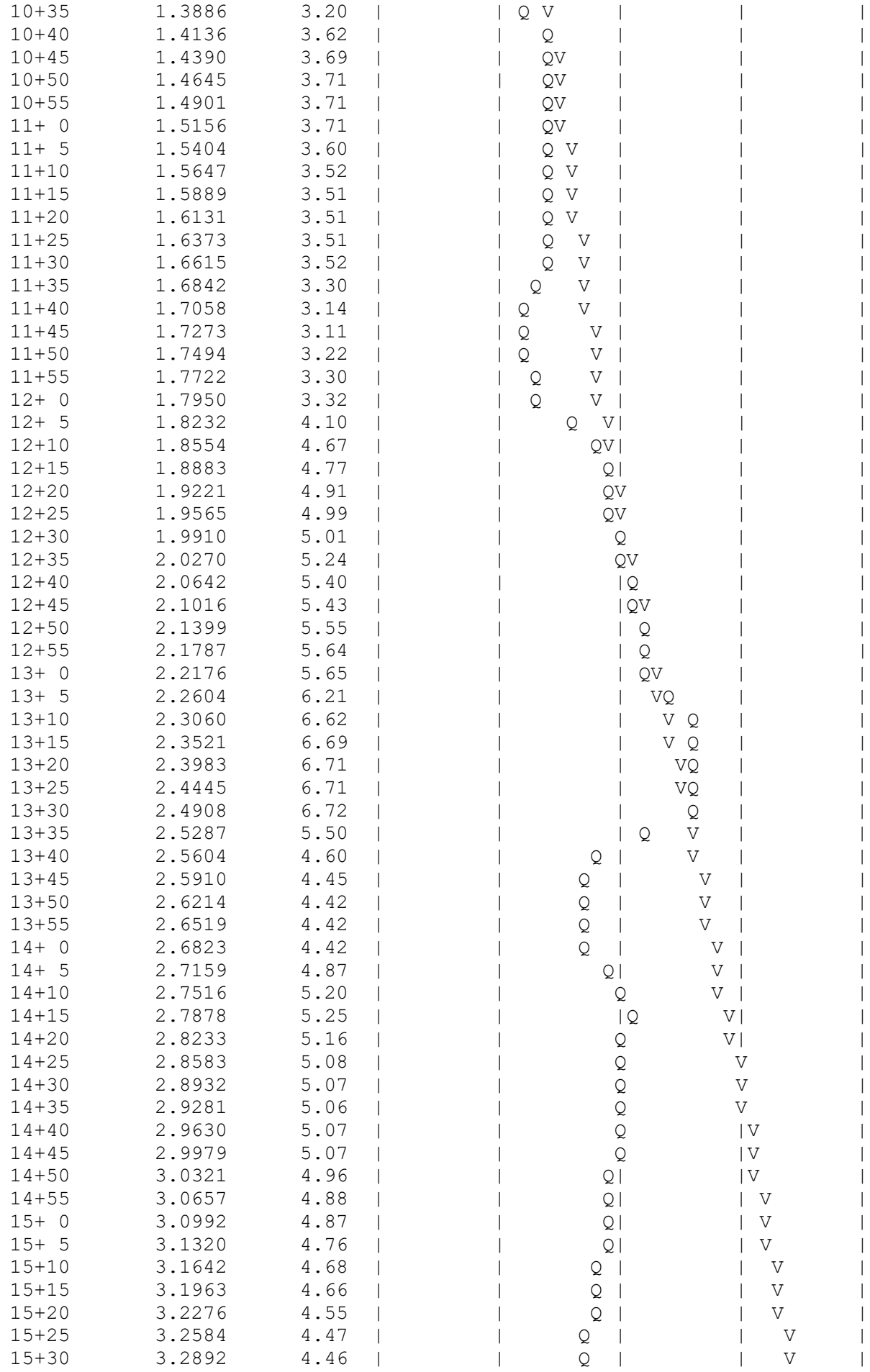
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0012	0.18	Q	|	|	|	|
0+10	0.0034	0.32	VQ	|	|	|	|
0+15	0.0058	0.34	VQ	|	|	|	|
0+20	0.0088	0.43	VQ	|	|	|	|
0+25	0.0122	0.50	V Q	|	|	|	|
0+30	0.0157	0.51	V Q	|	|	|	|

0+35	0.0193	0.52	V Q	|	|	|	|
0+40	0.0229	0.52	V Q	|	|	|	|
0+45	0.0264	0.52	V Q	|	|	|	|
0+50	0.0306	0.61	V Q	|	|	|	|
0+55	0.0352	0.67	V Q	|	|	|	|
1+ 0	0.0399	0.69	V Q	|	|	|	|
1+ 5	0.0441	0.60	V Q	|	|	|	|
1+10	0.0477	0.53	V Q	|	|	|	|
1+15	0.0513	0.52	V Q	|	|	|	|
1+20	0.0548	0.52	V Q	|	|	|	|
1+25	0.0584	0.52	V Q	|	|	|	|
1+30	0.0619	0.52	V Q	|	|	|	|
1+35	0.0655	0.52	V Q	|	|	|	|
1+40	0.0690	0.52	V Q	|	|	|	|
1+45	0.0726	0.52	V Q	|	|	|	|
1+50	0.0768	0.61	V Q	|	|	|	|
1+55	0.0814	0.67	V Q	|	|	|	|
2+ 0	0.0861	0.69	V Q	|	|	|	|
2+ 5	0.0909	0.69	V Q	|	|	|	|
2+10	0.0956	0.69	|VQ	|	|	|	|
2+15	0.1003	0.69	|VQ	|	|	|	|
2+20	0.1051	0.69	|VQ	|	|	|	|
2+25	0.1098	0.69	|VQ	|	|	|	|
2+30	0.1146	0.69	|VQ	|	|	|	|
2+35	0.1199	0.78	|V Q	|	|	|	|
2+40	0.1257	0.85	|V Q	|	|	|	|
2+45	0.1317	0.86	|V Q	|	|	|	|
2+50	0.1376	0.86	|V Q	|	|	|	|
2+55	0.1435	0.86	|V Q	|	|	|	|
3+ 0	0.1494	0.86	|V Q	|	|	|	|
3+ 5	0.1553	0.86	|V Q	|	|	|	|
3+10	0.1613	0.86	|V Q	|	|	|	|
3+15	0.1672	0.86	|V Q	|	|	|	|
3+20	0.1731	0.86	|V Q	|	|	|	|
3+25	0.1790	0.86	|V Q	|	|	|	|
3+30	0.1850	0.86	|V Q	|	|	|	|
3+35	0.1909	0.86	| VQ	|	|	|	|
3+40	0.1968	0.86	| VQ	|	|	|	|
3+45	0.2027	0.86	| VQ	|	|	|	|
3+50	0.2093	0.95	| VQ	|	|	|	|
3+55	0.2163	1.02	| V Q	|	|	|	|
4+ 0	0.2234	1.03	| V Q	|	|	|	|
4+ 5	0.2305	1.03	| V Q	|	|	|	|
4+10	0.2376	1.03	| V Q	|	|	|	|
4+15	0.2447	1.03	| V Q	|	|	|	|
4+20	0.2524	1.12	| V Q	|	|	|	|
4+25	0.2606	1.19	| V Q	|	|	|	|
4+30	0.2689	1.20	| V Q	|	|	|	|
4+35	0.2772	1.20	| V Q	|	|	|	|
4+40	0.2855	1.20	| VQ	|	|	|	|
4+45	0.2938	1.20	| VQ	|	|	|	|
4+50	0.3027	1.29	| V Q	|	|	|	|
4+55	0.3120	1.36	| V Q	|	|	|	|
5+ 0	0.3215	1.37	| V Q	|	|	|	|
5+ 5	0.3297	1.19	| VQ	|	|	|	|
5+10	0.3370	1.06	| VQ	|	|	|	|
5+15	0.3442	1.04	| VQ	|	|	|	|
5+20	0.3519	1.12	| VQ	|	|	|	|
5+25	0.3601	1.19	| VQ	|	|	|	|
5+30	0.3684	1.20	| VQ	|	|	|	|

5+35	0.3773	1.29	V Q				
5+40	0.3867	1.36	VQ				
5+45	0.3961	1.37	VQ				
5+50	0.4056	1.38	VQ				
5+55	0.4151	1.38	VQ				
6+ 0	0.4246	1.38	VQ				
6+ 5	0.4347	1.47	VQ				
6+10	0.4452	1.53	V Q				
6+15	0.4559	1.55	V Q				
6+20	0.4665	1.55	V Q				
6+25	0.4772	1.55	VQ				
6+30	0.4878	1.55	VQ				
6+35	0.4991	1.64	VQ				
6+40	0.5109	1.71	VQ				
6+45	0.5227	1.72	VQ				
6+50	0.5345	1.72	VQ				
6+55	0.5464	1.72	VQ				
7+ 0	0.5582	1.72	VQ				
7+ 5	0.5701	1.72	Q				
7+10	0.5819	1.72	Q				
7+15	0.5938	1.72	Q				
7+20	0.6062	1.81	VQ				
7+25	0.6192	1.88	VQ				
7+30	0.6322	1.89	VQ				
7+35	0.6458	1.98	VQ				
7+40	0.6599	2.05	V Q				
7+45	0.6741	2.06	VQ				
7+50	0.6890	2.15	VQ				
7+55	0.7043	2.22	VQ				
8+ 0	0.7197	2.23	VQ				
8+ 5	0.7363	2.42	V Q				
8+10	0.7539	2.55	V Q				
8+15	0.7716	2.58	V Q				
8+20	0.7894	2.58	V Q				
8+25	0.8072	2.59	V Q				
8+30	0.8251	2.59	V Q				
8+35	0.8437	2.70	V Q				
8+40	0.8629	2.79	V|Q				
8+45	0.8822	2.80	V|Q				
8+50	0.9023	2.92	V|Q				
8+55	0.9230	3.00	V| Q				
9+ 0	0.9438	3.02	V| Q				
9+ 5	0.9661	3.25	V Q				
9+10	0.9896	3.41	V Q				
9+15	1.0134	3.44	V Q				
9+20	1.0379	3.56	V Q				
9+25	1.0630	3.65	|V Q				
9+30	1.0883	3.67	|V Q				
9+35	1.1143	3.78	|V Q				
9+40	1.1410	3.87	| V Q				
9+45	1.1677	3.88	| V Q				
9+50	1.1952	4.00	| V Q				
9+55	1.2234	4.08	| V Q				
10+ 0	1.2516	4.10	| V Q				
10+ 5	1.2745	3.33	| Q				
10+10	1.2935	2.76	|Q V				
10+15	1.3119	2.66	Q V				
10+20	1.3301	2.64	Q V				
10+25	1.3483	2.65	Q V				
10+30	1.3666	2.65	Q V				



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15+35       3.3168      4.02  |         |     Q   |         |   V     |
15+40       3.3422      3.69  |         |   Q     |         |    V    |
15+45       3.3673      3.64  |         |   Q     |         |    V    |
15+50       3.3922      3.63  |         |   Q     |         |    V    |
15+55       3.4172      3.63  |         |   Q     |         |    V    |
16+ 0       3.4422      3.63  |         |   Q     |         |     V   |
16+ 5       3.4565      2.08  |       Q |         |         |     V   |
16+10       3.4629      0.93  |  Q      |         |         |     V   |
16+15       3.4680      0.73  | Q       |         |         |     V   |
16+20       3.4727      0.69  | Q       |         |         |     V   |
16+25       3.4774      0.69  | Q       |         |         |     V   |
16+30       3.4822      0.69  | Q       |         |         |     V   |
16+35       3.4863      0.60  | Q       |         |         |     V   |
16+40       3.4899      0.53  | Q       |         |         |     V   |
16+45       3.4935      0.52  | Q       |         |         |     V   |
16+50       3.4971      0.52  | Q       |         |         |     V   |
16+55       3.5006      0.52  | Q       |         |         |     V   |
17+ 0       3.5042      0.52  | Q       |         |         |     V   |
17+ 5       3.5090      0.70  | Q       |         |         |     V   |
17+10       3.5147      0.83  |  Q      |         |         |      V  |
17+15       3.5206      0.85  |  Q      |         |         |      V  |
17+20       3.5265      0.86  |  Q      |         |         |      V  |
17+25       3.5324      0.86  |  Q      |         |         |      V  |
17+30       3.5384      0.86  |  Q      |         |         |      V  |
17+35       3.5443      0.86  |  Q      |         |         |      V  |
17+40       3.5502      0.86  |  Q      |         |         |      V  |
17+45       3.5561      0.86  |  Q      |         |         |      V  |
17+50       3.5614      0.77  |  Q      |         |         |      V  |
17+55       3.5663      0.70  | Q       |         |         |      V  |
18+ 0       3.5710      0.69  | Q       |         |         |      V  |
18+ 5       3.5757      0.69  | Q       |         |         |      V  |
18+10       3.5805      0.69  | Q       |         |         |      V  |
18+15       3.5852      0.69  | Q       |         |         |      V  |
18+20       3.5900      0.69  | Q       |         |         |      V  |
18+25       3.5947      0.69  | Q       |         |         |      V  |
18+30       3.5994      0.69  | Q       |         |         |      V  |
18+35       3.6035      0.60  | Q       |         |         |      V  |
18+40       3.6072      0.53  | Q       |         |         |      V  |
18+45       3.6108      0.52  | Q       |         |         |       V |
18+50       3.6137      0.43  |Q        |         |         |       V |
18+55       3.6162      0.36  |Q        |         |         |       V |
19+ 0       3.6185      0.35  |Q        |         |         |       V |
19+ 5       3.6215      0.43  |Q        |         |         |       V |
19+10       3.6250      0.50  | Q       |         |         |       V |
19+15       3.6285      0.51  | Q       |         |         |       V |
19+20       3.6327      0.61  | Q       |         |         |       V |
19+25       3.6374      0.67  | Q       |         |         |       V |
19+30       3.6421      0.69  | Q       |         |         |       V |
19+35       3.6462      0.60  | Q       |         |         |       V |
19+40       3.6498      0.53  | Q       |         |         |       V |
19+45       3.6534      0.52  | Q       |         |         |       V |
19+50       3.6563      0.43  |Q        |         |         |       V |
19+55       3.6588      0.36  |Q        |         |         |       V |
20+ 0       3.6612      0.35  |Q        |         |         |       V |
20+ 5       3.6642      0.43  |Q        |         |         |       V |
20+10       3.6676      0.50  | Q       |         |         |       V |
20+15       3.6712      0.51  | Q       |         |         |       V |
20+20       3.6747      0.52  | Q       |         |         |       V |
20+25       3.6783      0.52  | Q       |         |         |       V |
20+30       3.6818      0.52  | Q       |         |         |       V |
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20+35	3.6854	0.52	| Q	|	|	V |
20+40	3.6889	0.52	| Q	|	|	V |
20+45	3.6925	0.52	| Q	|	|	V |
20+50	3.6954	0.43	|Q	|	|	V |
20+55	3.6979	0.36	|Q	|	|	V |
21+ 0	3.7003	0.35	|Q	|	|	V |
21+ 5	3.7033	0.43	|Q	|	|	V|
21+10	3.7067	0.50	| Q	|	|	V|
21+15	3.7103	0.51	| Q	|	|	V|
21+20	3.7132	0.43	|Q	|	|	V|
21+25	3.7157	0.36	|Q	|	|	V|
21+30	3.7180	0.35	|Q	|	|	V|
21+35	3.7210	0.43	|Q	|	|	V|
21+40	3.7245	0.50	| Q	|	|	V|
21+45	3.7280	0.51	| Q	|	|	V|
21+50	3.7310	0.43	|Q	|	|	V|
21+55	3.7334	0.36	|Q	|	|	V|
22+ 0	3.7358	0.35	|Q	|	|	V|
22+ 5	3.7388	0.43	|Q	|	|	V|
22+10	3.7423	0.50	| Q	|	|	V|
22+15	3.7458	0.51	| Q	|	|	V|
22+20	3.7487	0.43	|Q	|	|	V|
22+25	3.7512	0.36	|Q	|	|	V|
22+30	3.7536	0.35	|Q	|	|	V|
22+35	3.7559	0.34	|Q	|	|	V|
22+40	3.7583	0.34	|Q	|	|	V|
22+45	3.7607	0.34	|Q	|	|	V|
22+50	3.7630	0.34	|Q	|	|	V|
22+55	3.7654	0.34	|Q	|	|	V|
23+ 0	3.7678	0.34	|Q	|	|	V|
23+ 5	3.7702	0.34	|Q	|	|	V|
23+10	3.7725	0.34	|Q	|	|	V|
23+15	3.7749	0.34	|Q	|	|	V|
23+20	3.7773	0.34	|Q	|	|	V|
23+25	3.7796	0.34	|Q	|	|	V|
23+30	3.7820	0.34	|Q	|	|	V|
23+35	3.7844	0.34	|Q	|	|	V|
23+40	3.7867	0.34	|Q	|	|	V|
23+45	3.7891	0.34	|Q	|	|	V|
23+50	3.7915	0.34	|Q	|	|	V|
23+55	3.7938	0.34	|Q	|	|	V|
24+ 0	3.7962	0.34	|Q	|	|	V|
24+ 5	3.7973	0.16	Q	|	|	V|
24+10	3.7975	0.03	Q	|	|	V|
24+15	3.7976	0.01	Q	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750bpb242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
Proposed Area B
2 year 24 hour

Drainage Area = 22.80(Ac.) = 0.036 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 22.80(Ac.) = 0.036 Sq. Mi.
Length along longest watercourse = 1736.00(Ft.)
Length along longest watercourse measured to centroid = 355.00(Ft.)
Length along longest watercourse = 0.329 Mi.
Length along longest watercourse measured to centroid = 0.067 Mi.
Difference in elevation = 13.50(Ft.)
Slope along watercourse = 41.0599 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.042 Hr.
Lag time = 2.51 Min.
25% of lag time = 0.63 Min.
40% of lag time = 1.00 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 1.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
22.80	1.60	36.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
22.80	4.00	91.20

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 1.600(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.600(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
22.800	69.00	0.900

Total Area Entered = 22.80(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	49.8	0.574	0.900	0.109	1.000	0.109
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.180

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	199.596	43.331	9.957
2	0.167	399.192	43.396	9.972
3	0.250	598.788	8.810	2.024
4	0.333	798.384	3.422	0.786
5	0.417	997.980	1.040	0.239
			Sum = 100.000	Sum= 22.978

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.013	(0.193)		0.002	0.010
2	0.17	0.07	0.013	(0.193)		0.002	0.010
3	0.25	0.07	0.013	(0.192)		0.002	0.010
4	0.33	0.10	0.019	(0.191)		0.003	0.016
5	0.42	0.10	0.019	(0.190)		0.003	0.016
6	0.50	0.10	0.019	(0.190)		0.003	0.016
7	0.58	0.10	0.019	(0.189)		0.003	0.016
8	0.67	0.10	0.019	(0.188)		0.003	0.016
9	0.75	0.10	0.019	(0.187)		0.003	0.016
10	0.83	0.13	0.026	(0.187)		0.005	0.021
11	0.92	0.13	0.026	(0.186)		0.005	0.021
12	1.00	0.13	0.026	(0.185)		0.005	0.021
13	1.08	0.10	0.019	(0.184)		0.003	0.016
14	1.17	0.10	0.019	(0.184)		0.003	0.016

15	1.25	0.10	0.019	(0.183)	0.003	0.016
16	1.33	0.10	0.019	(0.182)	0.003	0.016
17	1.42	0.10	0.019	(0.182)	0.003	0.016
18	1.50	0.10	0.019	(0.181)	0.003	0.016
19	1.58	0.10	0.019	(0.180)	0.003	0.016
20	1.67	0.10	0.019	(0.179)	0.003	0.016
21	1.75	0.10	0.019	(0.179)	0.003	0.016
22	1.83	0.13	0.026	(0.178)	0.005	0.021
23	1.92	0.13	0.026	(0.177)	0.005	0.021
24	2.00	0.13	0.026	(0.176)	0.005	0.021
25	2.08	0.13	0.026	(0.176)	0.005	0.021
26	2.17	0.13	0.026	(0.175)	0.005	0.021
27	2.25	0.13	0.026	(0.174)	0.005	0.021
28	2.33	0.13	0.026	(0.174)	0.005	0.021
29	2.42	0.13	0.026	(0.173)	0.005	0.021
30	2.50	0.13	0.026	(0.172)	0.005	0.021
31	2.58	0.17	0.032	(0.172)	0.006	0.026
32	2.67	0.17	0.032	(0.171)	0.006	0.026
33	2.75	0.17	0.032	(0.170)	0.006	0.026
34	2.83	0.17	0.032	(0.169)	0.006	0.026
35	2.92	0.17	0.032	(0.169)	0.006	0.026
36	3.00	0.17	0.032	(0.168)	0.006	0.026
37	3.08	0.17	0.032	(0.167)	0.006	0.026
38	3.17	0.17	0.032	(0.167)	0.006	0.026
39	3.25	0.17	0.032	(0.166)	0.006	0.026
40	3.33	0.17	0.032	(0.165)	0.006	0.026
41	3.42	0.17	0.032	(0.165)	0.006	0.026
42	3.50	0.17	0.032	(0.164)	0.006	0.026
43	3.58	0.17	0.032	(0.163)	0.006	0.026
44	3.67	0.17	0.032	(0.162)	0.006	0.026
45	3.75	0.17	0.032	(0.162)	0.006	0.026
46	3.83	0.20	0.038	(0.161)	0.007	0.031
47	3.92	0.20	0.038	(0.160)	0.007	0.031
48	4.00	0.20	0.038	(0.160)	0.007	0.031
49	4.08	0.20	0.038	(0.159)	0.007	0.031
50	4.17	0.20	0.038	(0.158)	0.007	0.031
51	4.25	0.20	0.038	(0.158)	0.007	0.031
52	4.33	0.23	0.045	(0.157)	0.008	0.037
53	4.42	0.23	0.045	(0.156)	0.008	0.037
54	4.50	0.23	0.045	(0.156)	0.008	0.037
55	4.58	0.23	0.045	(0.155)	0.008	0.037
56	4.67	0.23	0.045	(0.154)	0.008	0.037
57	4.75	0.23	0.045	(0.154)	0.008	0.037
58	4.83	0.27	0.051	(0.153)	0.009	0.042
59	4.92	0.27	0.051	(0.152)	0.009	0.042
60	5.00	0.27	0.051	(0.152)	0.009	0.042
61	5.08	0.20	0.038	(0.151)	0.007	0.031
62	5.17	0.20	0.038	(0.150)	0.007	0.031
63	5.25	0.20	0.038	(0.150)	0.007	0.031
64	5.33	0.23	0.045	(0.149)	0.008	0.037
65	5.42	0.23	0.045	(0.148)	0.008	0.037
66	5.50	0.23	0.045	(0.148)	0.008	0.037
67	5.58	0.27	0.051	(0.147)	0.009	0.042
68	5.67	0.27	0.051	(0.147)	0.009	0.042
69	5.75	0.27	0.051	(0.146)	0.009	0.042
70	5.83	0.27	0.051	(0.145)	0.009	0.042
71	5.92	0.27	0.051	(0.145)	0.009	0.042
72	6.00	0.27	0.051	(0.144)	0.009	0.042
73	6.08	0.30	0.058	(0.143)	0.010	0.047
74	6.17	0.30	0.058	(0.143)	0.010	0.047

75	6.25	0.30	0.058	(0.142)	0.010	0.047
76	6.33	0.30	0.058	(0.141)	0.010	0.047
77	6.42	0.30	0.058	(0.141)	0.010	0.047
78	6.50	0.30	0.058	(0.140)	0.010	0.047
79	6.58	0.33	0.064	(0.140)	0.012	0.052
80	6.67	0.33	0.064	(0.139)	0.012	0.052
81	6.75	0.33	0.064	(0.138)	0.012	0.052
82	6.83	0.33	0.064	(0.138)	0.012	0.052
83	6.92	0.33	0.064	(0.137)	0.012	0.052
84	7.00	0.33	0.064	(0.136)	0.012	0.052
85	7.08	0.33	0.064	(0.136)	0.012	0.052
86	7.17	0.33	0.064	(0.135)	0.012	0.052
87	7.25	0.33	0.064	(0.135)	0.012	0.052
88	7.33	0.37	0.070	(0.134)	0.013	0.058
89	7.42	0.37	0.070	(0.133)	0.013	0.058
90	7.50	0.37	0.070	(0.133)	0.013	0.058
91	7.58	0.40	0.077	(0.132)	0.014	0.063
92	7.67	0.40	0.077	(0.131)	0.014	0.063
93	7.75	0.40	0.077	(0.131)	0.014	0.063
94	7.83	0.43	0.083	(0.130)	0.015	0.068
95	7.92	0.43	0.083	(0.130)	0.015	0.068
96	8.00	0.43	0.083	(0.129)	0.015	0.068
97	8.08	0.50	0.096	(0.128)	0.017	0.079
98	8.17	0.50	0.096	(0.128)	0.017	0.079
99	8.25	0.50	0.096	(0.127)	0.017	0.079
100	8.33	0.50	0.096	(0.127)	0.017	0.079
101	8.42	0.50	0.096	(0.126)	0.017	0.079
102	8.50	0.50	0.096	(0.125)	0.017	0.079
103	8.58	0.53	0.102	(0.125)	0.018	0.084
104	8.67	0.53	0.102	(0.124)	0.018	0.084
105	8.75	0.53	0.102	(0.124)	0.018	0.084
106	8.83	0.57	0.109	(0.123)	0.020	0.089
107	8.92	0.57	0.109	(0.123)	0.020	0.089
108	9.00	0.57	0.109	(0.122)	0.020	0.089
109	9.08	0.63	0.122	(0.121)	0.022	0.100
110	9.17	0.63	0.122	(0.121)	0.022	0.100
111	9.25	0.63	0.122	(0.120)	0.022	0.100
112	9.33	0.67	0.128	(0.120)	0.023	0.105
113	9.42	0.67	0.128	(0.119)	0.023	0.105
114	9.50	0.67	0.128	(0.119)	0.023	0.105
115	9.58	0.70	0.134	(0.118)	0.024	0.110
116	9.67	0.70	0.134	(0.117)	0.024	0.110
117	9.75	0.70	0.134	(0.117)	0.024	0.110
118	9.83	0.73	0.141	(0.116)	0.025	0.115
119	9.92	0.73	0.141	(0.116)	0.025	0.115
120	10.00	0.73	0.141	(0.115)	0.025	0.115
121	10.08	0.50	0.096	(0.115)	0.017	0.079
122	10.17	0.50	0.096	(0.114)	0.017	0.079
123	10.25	0.50	0.096	(0.113)	0.017	0.079
124	10.33	0.50	0.096	(0.113)	0.017	0.079
125	10.42	0.50	0.096	(0.112)	0.017	0.079
126	10.50	0.50	0.096	(0.112)	0.017	0.079
127	10.58	0.67	0.128	(0.111)	0.023	0.105
128	10.67	0.67	0.128	(0.111)	0.023	0.105
129	10.75	0.67	0.128	(0.110)	0.023	0.105
130	10.83	0.67	0.128	(0.110)	0.023	0.105
131	10.92	0.67	0.128	(0.109)	0.023	0.105
132	11.00	0.67	0.128	(0.109)	0.023	0.105
133	11.08	0.63	0.122	(0.108)	0.022	0.100
134	11.17	0.63	0.122	(0.108)	0.022	0.100

135	11.25	0.63	0.122	(0.107)	0.022	0.100
136	11.33	0.63	0.122	(0.106)	0.022	0.100
137	11.42	0.63	0.122	(0.106)	0.022	0.100
138	11.50	0.63	0.122	(0.105)	0.022	0.100
139	11.58	0.57	0.109	(0.105)	0.020	0.089
140	11.67	0.57	0.109	(0.104)	0.020	0.089
141	11.75	0.57	0.109	(0.104)	0.020	0.089
142	11.83	0.60	0.115	(0.103)	0.021	0.094
143	11.92	0.60	0.115	(0.103)	0.021	0.094
144	12.00	0.60	0.115	(0.102)	0.021	0.094
145	12.08	0.83	0.160	(0.102)	0.029	0.131
146	12.17	0.83	0.160	(0.101)	0.029	0.131
147	12.25	0.83	0.160	(0.101)	0.029	0.131
148	12.33	0.87	0.166	(0.100)	0.030	0.136
149	12.42	0.87	0.166	(0.100)	0.030	0.136
150	12.50	0.87	0.166	(0.099)	0.030	0.136
151	12.58	0.93	0.179	(0.099)	0.032	0.147
152	12.67	0.93	0.179	(0.098)	0.032	0.147
153	12.75	0.93	0.179	(0.098)	0.032	0.147
154	12.83	0.97	0.186	(0.097)	0.033	0.152
155	12.92	0.97	0.186	(0.097)	0.033	0.152
156	13.00	0.97	0.186	(0.096)	0.033	0.152
157	13.08	1.13	0.218	(0.096)	0.039	0.178
158	13.17	1.13	0.218	(0.095)	0.039	0.178
159	13.25	1.13	0.218	(0.095)	0.039	0.178
160	13.33	1.13	0.218	(0.094)	0.039	0.178
161	13.42	1.13	0.218	(0.094)	0.039	0.178
162	13.50	1.13	0.218	(0.093)	0.039	0.178
163	13.58	0.77	0.147	(0.093)	0.026	0.121
164	13.67	0.77	0.147	(0.092)	0.026	0.121
165	13.75	0.77	0.147	(0.092)	0.026	0.121
166	13.83	0.77	0.147	(0.092)	0.026	0.121
167	13.92	0.77	0.147	(0.091)	0.026	0.121
168	14.00	0.77	0.147	(0.091)	0.026	0.121
169	14.08	0.90	0.173	(0.090)	0.031	0.142
170	14.17	0.90	0.173	(0.090)	0.031	0.142
171	14.25	0.90	0.173	(0.089)	0.031	0.142
172	14.33	0.87	0.166	(0.089)	0.030	0.136
173	14.42	0.87	0.166	(0.088)	0.030	0.136
174	14.50	0.87	0.166	(0.088)	0.030	0.136
175	14.58	0.87	0.166	(0.087)	0.030	0.136
176	14.67	0.87	0.166	(0.087)	0.030	0.136
177	14.75	0.87	0.166	(0.086)	0.030	0.136
178	14.83	0.83	0.160	(0.086)	0.029	0.131
179	14.92	0.83	0.160	(0.086)	0.029	0.131
180	15.00	0.83	0.160	(0.085)	0.029	0.131
181	15.08	0.80	0.154	(0.085)	0.028	0.126
182	15.17	0.80	0.154	(0.084)	0.028	0.126
183	15.25	0.80	0.154	(0.084)	0.028	0.126
184	15.33	0.77	0.147	(0.083)	0.026	0.121
185	15.42	0.77	0.147	(0.083)	0.026	0.121
186	15.50	0.77	0.147	(0.083)	0.026	0.121
187	15.58	0.63	0.122	(0.082)	0.022	0.100
188	15.67	0.63	0.122	(0.082)	0.022	0.100
189	15.75	0.63	0.122	(0.081)	0.022	0.100
190	15.83	0.63	0.122	(0.081)	0.022	0.100
191	15.92	0.63	0.122	(0.080)	0.022	0.100
192	16.00	0.63	0.122	(0.080)	0.022	0.100
193	16.08	0.13	0.026	(0.080)	0.005	0.021
194	16.17	0.13	0.026	(0.079)	0.005	0.021

195	16.25	0.13	0.026	(0.079)	0.005	0.021
196	16.33	0.13	0.026	(0.078)	0.005	0.021
197	16.42	0.13	0.026	(0.078)	0.005	0.021
198	16.50	0.13	0.026	(0.078)	0.005	0.021
199	16.58	0.10	0.019	(0.077)	0.003	0.016
200	16.67	0.10	0.019	(0.077)	0.003	0.016
201	16.75	0.10	0.019	(0.076)	0.003	0.016
202	16.83	0.10	0.019	(0.076)	0.003	0.016
203	16.92	0.10	0.019	(0.076)	0.003	0.016
204	17.00	0.10	0.019	(0.075)	0.003	0.016
205	17.08	0.17	0.032	(0.075)	0.006	0.026
206	17.17	0.17	0.032	(0.075)	0.006	0.026
207	17.25	0.17	0.032	(0.074)	0.006	0.026
208	17.33	0.17	0.032	(0.074)	0.006	0.026
209	17.42	0.17	0.032	(0.073)	0.006	0.026
210	17.50	0.17	0.032	(0.073)	0.006	0.026
211	17.58	0.17	0.032	(0.073)	0.006	0.026
212	17.67	0.17	0.032	(0.072)	0.006	0.026
213	17.75	0.17	0.032	(0.072)	0.006	0.026
214	17.83	0.13	0.026	(0.072)	0.005	0.021
215	17.92	0.13	0.026	(0.071)	0.005	0.021
216	18.00	0.13	0.026	(0.071)	0.005	0.021
217	18.08	0.13	0.026	(0.071)	0.005	0.021
218	18.17	0.13	0.026	(0.070)	0.005	0.021
219	18.25	0.13	0.026	(0.070)	0.005	0.021
220	18.33	0.13	0.026	(0.070)	0.005	0.021
221	18.42	0.13	0.026	(0.069)	0.005	0.021
222	18.50	0.13	0.026	(0.069)	0.005	0.021
223	18.58	0.10	0.019	(0.069)	0.003	0.016
224	18.67	0.10	0.019	(0.068)	0.003	0.016
225	18.75	0.10	0.019	(0.068)	0.003	0.016
226	18.83	0.07	0.013	(0.068)	0.002	0.010
227	18.92	0.07	0.013	(0.067)	0.002	0.010
228	19.00	0.07	0.013	(0.067)	0.002	0.010
229	19.08	0.10	0.019	(0.067)	0.003	0.016
230	19.17	0.10	0.019	(0.066)	0.003	0.016
231	19.25	0.10	0.019	(0.066)	0.003	0.016
232	19.33	0.13	0.026	(0.066)	0.005	0.021
233	19.42	0.13	0.026	(0.065)	0.005	0.021
234	19.50	0.13	0.026	(0.065)	0.005	0.021
235	19.58	0.10	0.019	(0.065)	0.003	0.016
236	19.67	0.10	0.019	(0.064)	0.003	0.016
237	19.75	0.10	0.019	(0.064)	0.003	0.016
238	19.83	0.07	0.013	(0.064)	0.002	0.010
239	19.92	0.07	0.013	(0.064)	0.002	0.010
240	20.00	0.07	0.013	(0.063)	0.002	0.010
241	20.08	0.10	0.019	(0.063)	0.003	0.016
242	20.17	0.10	0.019	(0.063)	0.003	0.016
243	20.25	0.10	0.019	(0.062)	0.003	0.016
244	20.33	0.10	0.019	(0.062)	0.003	0.016
245	20.42	0.10	0.019	(0.062)	0.003	0.016
246	20.50	0.10	0.019	(0.062)	0.003	0.016
247	20.58	0.10	0.019	(0.061)	0.003	0.016
248	20.67	0.10	0.019	(0.061)	0.003	0.016
249	20.75	0.10	0.019	(0.061)	0.003	0.016
250	20.83	0.07	0.013	(0.061)	0.002	0.010
251	20.92	0.07	0.013	(0.060)	0.002	0.010
252	21.00	0.07	0.013	(0.060)	0.002	0.010
253	21.08	0.10	0.019	(0.060)	0.003	0.016
254	21.17	0.10	0.019	(0.060)	0.003	0.016

255	21.25	0.10	0.019	(0.059)	0.003	0.016
256	21.33	0.07	0.013	(0.059)	0.002	0.010
257	21.42	0.07	0.013	(0.059)	0.002	0.010
258	21.50	0.07	0.013	(0.059)	0.002	0.010
259	21.58	0.10	0.019	(0.059)	0.003	0.016
260	21.67	0.10	0.019	(0.058)	0.003	0.016
261	21.75	0.10	0.019	(0.058)	0.003	0.016
262	21.83	0.07	0.013	(0.058)	0.002	0.010
263	21.92	0.07	0.013	(0.058)	0.002	0.010
264	22.00	0.07	0.013	(0.058)	0.002	0.010
265	22.08	0.10	0.019	(0.057)	0.003	0.016
266	22.17	0.10	0.019	(0.057)	0.003	0.016
267	22.25	0.10	0.019	(0.057)	0.003	0.016
268	22.33	0.07	0.013	(0.057)	0.002	0.010
269	22.42	0.07	0.013	(0.057)	0.002	0.010
270	22.50	0.07	0.013	(0.057)	0.002	0.010
271	22.58	0.07	0.013	(0.056)	0.002	0.010
272	22.67	0.07	0.013	(0.056)	0.002	0.010
273	22.75	0.07	0.013	(0.056)	0.002	0.010
274	22.83	0.07	0.013	(0.056)	0.002	0.010
275	22.92	0.07	0.013	(0.056)	0.002	0.010
276	23.00	0.07	0.013	(0.056)	0.002	0.010
277	23.08	0.07	0.013	(0.055)	0.002	0.010
278	23.17	0.07	0.013	(0.055)	0.002	0.010
279	23.25	0.07	0.013	(0.055)	0.002	0.010
280	23.33	0.07	0.013	(0.055)	0.002	0.010
281	23.42	0.07	0.013	(0.055)	0.002	0.010
282	23.50	0.07	0.013	(0.055)	0.002	0.010
283	23.58	0.07	0.013	(0.055)	0.002	0.010
284	23.67	0.07	0.013	(0.055)	0.002	0.010
285	23.75	0.07	0.013	(0.055)	0.002	0.010
286	23.83	0.07	0.013	(0.055)	0.002	0.010
287	23.92	0.07	0.013	(0.055)	0.002	0.010
288	24.00	0.07	0.013	(0.055)	0.002	0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 15.7

Flood volume = Effective rainfall 1.31(In)
times area 22.8(Ac.)/[(In)/(Ft.)] = 2.5(Ac.Ft)
Total soil loss = 0.29(In)
Total soil loss = 0.547(Ac.Ft)
Total rainfall = 1.60(In)
Flood volume = 108581.5 Cubic Feet
Total soil loss = 23835.0 Cubic Feet

Peak flow rate of this hydrograph = 5.102(CFS)

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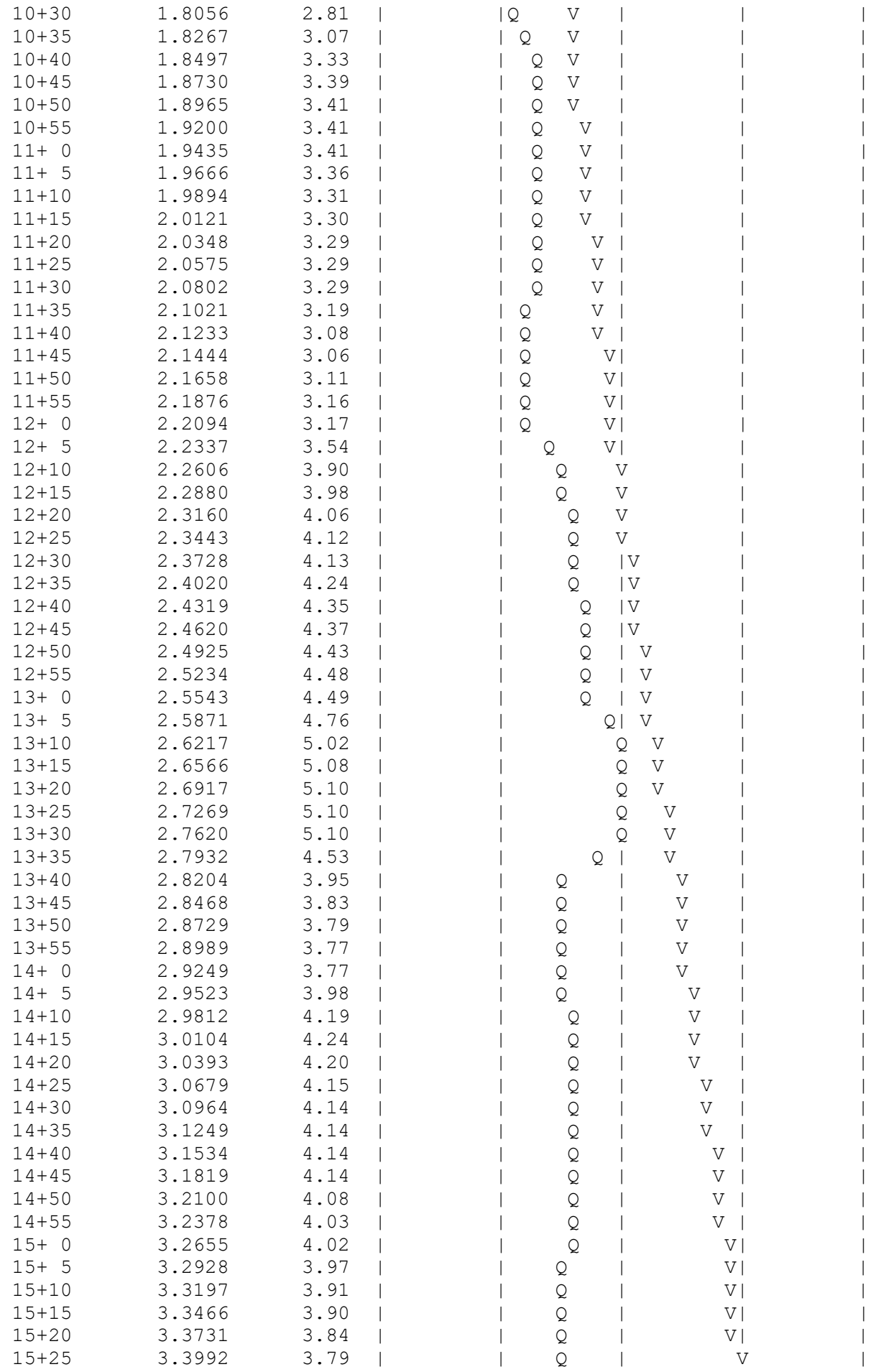
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0076	1.10	V Q	|	|	|	|
0+10	0.0159	1.21	V Q	|	|	|	|
0+15	0.0244	1.23	V Q	|	|	|	|
0+20	0.0333	1.29	V Q	|	|	|	|
0+25	0.0426	1.35	V Q	|	|	|	|

0+30	0.0519	1.36	V	Q	|	|	|
0+35	0.0613	1.36	V	Q	|	|	|
0+40	0.0707	1.36	V	Q	|	|	|
0+45	0.0800	1.36	V	Q	|	|	|
0+50	0.0898	1.41	V	Q	|	|	|
0+55	0.0999	1.47	V	Q	|	|	|
1+ 0	0.1101	1.48	V	Q	|	|	|
1+ 5	0.1199	1.43	|V	Q	|	|	|
1+10	0.1294	1.38	|V	Q	|	|	|
1+15	0.1388	1.37	|V	Q	|	|	|
1+20	0.1482	1.36	|V	Q	|	|	|
1+25	0.1576	1.36	|V	Q	|	|	|
1+30	0.1670	1.36	|V	Q	|	|	|
1+35	0.1763	1.36	|V	Q	|	|	|
1+40	0.1857	1.36	|V	Q	|	|	|
1+45	0.1951	1.36	|V	Q	|	|	|
1+50	0.2048	1.41	|V	Q	|	|	|
1+55	0.2149	1.47	|V	Q	|	|	|
2+ 0	0.2251	1.48	|V	Q	|	|	|
2+ 5	0.2353	1.48	| V	Q	|	|	|
2+10	0.2455	1.48	| V	Q	|	|	|
2+15	0.2557	1.48	| V	Q	|	|	|
2+20	0.2659	1.48	| V	Q	|	|	|
2+25	0.2762	1.48	| V	Q	|	|	|
2+30	0.2864	1.48	| V	Q	|	|	|
2+35	0.2969	1.53	| V	Q	|	|	|
2+40	0.3079	1.59	| V	Q	|	|	|
2+45	0.3189	1.60	| V	Q	|	|	|
2+50	0.3299	1.60	| V	Q	|	|	|
2+55	0.3409	1.60	| V	Q	|	|	|
3+ 0	0.3520	1.60	| V	Q	|	|	|
3+ 5	0.3630	1.60	| V	Q	|	|	|
3+10	0.3741	1.60	| V	Q	|	|	|
3+15	0.3851	1.60	| V	Q	|	|	|
3+20	0.3962	1.60	| V	Q	|	|	|
3+25	0.4072	1.60	| V	Q	|	|	|
3+30	0.4182	1.60	| V	Q	|	|	|
3+35	0.4293	1.60	| V	Q	|	|	|
3+40	0.4403	1.60	| V	Q	|	|	|
3+45	0.4514	1.60	| V	Q	|	|	|
3+50	0.4628	1.66	| V	Q	|	|	|
3+55	0.4745	1.71	| V	Q	|	|	|
4+ 0	0.4864	1.72	| V	Q	|	|	|
4+ 5	0.4982	1.72	| V	Q	|	|	|
4+10	0.5101	1.72	| V	Q	|	|	|
4+15	0.5220	1.72	| V	Q	|	|	|
4+20	0.5342	1.78	| V	Q	|	|	|
4+25	0.5468	1.83	| V	Q	|	|	|
4+30	0.5595	1.84	| V	Q	|	|	|
4+35	0.5722	1.84	| V	Q	|	|	|
4+40	0.5849	1.84	| V	Q	|	|	|
4+45	0.5976	1.84	| V	Q	|	|	|
4+50	0.6106	1.90	| V	Q	|	|	|
4+55	0.6240	1.95	| V	Q	|	|	|
5+ 0	0.6375	1.96	| V	Q	|	|	|
5+ 5	0.6503	1.86	| V	Q	|	|	|
5+10	0.6624	1.76	| V	Q	|	|	|
5+15	0.6744	1.73	| V	Q	|	|	|
5+20	0.6866	1.78	| V	Q	|	|	|
5+25	0.6992	1.83	| V	Q	|	|	|

5+30	0.7119	1.84	VQ				
5+35	0.7250	1.90	VQ				
5+40	0.7384	1.95	VQ				
5+45	0.7519	1.96	VQ				
5+50	0.7654	1.96	VQ				
5+55	0.7789	1.97	VQ				
6+ 0	0.7925	1.97	Q				
6+ 5	0.8064	2.02	VQ				
6+10	0.8206	2.07	VQ				
6+15	0.8349	2.08	VQ				
6+20	0.8493	2.08	VQ				
6+25	0.8637	2.09	VQ				
6+30	0.8780	2.09	VQ				
6+35	0.8928	2.14	VQ				
6+40	0.9078	2.19	Q				
6+45	0.9230	2.20	Q				
6+50	0.9382	2.21	Q				
6+55	0.9534	2.21	Q				
7+ 0	0.9686	2.21	Q				
7+ 5	0.9838	2.21	Q				
7+10	0.9990	2.21	Q				
7+15	1.0142	2.21	QV				
7+20	1.0297	2.26	Q				
7+25	1.0456	2.31	Q				
7+30	1.0616	2.32	Q				
7+35	1.0780	2.38	Q				
7+40	1.0948	2.43	Q				
7+45	1.1116	2.44	Q				
7+50	1.1288	2.50	QV				
7+55	1.1464	2.55	Q				
8+ 0	1.1640	2.56	Q				
8+ 5	1.1824	2.67	Q				
8+10	1.2015	2.78	VQ				
8+15	1.2208	2.80	VQ				
8+20	1.2402	2.81	Q				
8+25	1.2595	2.81	Q				
8+30	1.2789	2.81	Q				
8+35	1.2986	2.86	Q				
8+40	1.3186	2.91	Q				
8+45	1.3388	2.92	Q				
8+50	1.3593	2.98	QV				
8+55	1.3802	3.03	Q				
9+ 0	1.4012	3.05	Q				
9+ 5	1.4229	3.15	Q				
9+10	1.4454	3.26	VQ				
9+15	1.4680	3.28	Q				
9+20	1.4910	3.34	Q				
9+25	1.5144	3.40	Q				
9+30	1.5379	3.41	Q				
9+35	1.5617	3.46	Q				
9+40	1.5859	3.52	Q				
9+45	1.6102	3.53	Q				
9+50	1.6349	3.58	Q				
9+55	1.6600	3.64	Q				
10+ 0	1.6851	3.65	Q				
10+ 5	1.7077	3.29	Q V				
10+10	1.7279	2.92	Q V				
10+15	1.7475	2.85	Q V				
10+20	1.7669	2.82	Q V				
10+25	1.7862	2.81	Q V				



15+30	3.4252	3.78	|	Q	|	V |
15+35	3.4498	3.57	|	Q	|	V |
15+40	3.4729	3.36	|	Q	|	V |
15+45	3.4957	3.31	|	Q	|	|V |
15+50	3.5184	3.30	|	Q	|	|V |
15+55	3.5411	3.29	|	Q	|	|V |
16+ 0	3.5638	3.29	|	Q	|	|V |
16+ 5	3.5811	2.51	|	Q	|	|V |
16+10	3.5929	1.72	| Q	|	|	|V |
16+15	3.6037	1.56	| Q	|	|	| V |
16+20	3.6140	1.50	| Q	|	|	| V |
16+25	3.6243	1.48	| Q	|	|	| V |
16+30	3.6345	1.48	| Q	|	|	| V |
16+35	3.6443	1.43	| Q	|	|	| V |
16+40	3.6538	1.38	| Q	|	|	| V |
16+45	3.6632	1.37	| Q	|	|	| V |
16+50	3.6726	1.36	| Q	|	|	| V |
16+55	3.6820	1.36	| Q	|	|	| V |
17+ 0	3.6914	1.36	| Q	|	|	| V |
17+ 5	3.7015	1.47	| Q	|	|	| V |
17+10	3.7123	1.57	| Q	|	|	| V |
17+15	3.7233	1.59	| Q	|	|	| V |
17+20	3.7343	1.60	| Q	|	|	| V |
17+25	3.7453	1.60	| Q	|	|	| V |
17+30	3.7564	1.60	| Q	|	|	| V |
17+35	3.7674	1.60	| Q	|	|	| V |
17+40	3.7784	1.60	| Q	|	|	| V |
17+45	3.7895	1.60	| Q	|	|	| V |
17+50	3.8002	1.55	| Q	|	|	| V |
17+55	3.8105	1.50	| Q	|	|	| V |
18+ 0	3.8207	1.49	| Q	|	|	| V |
18+ 5	3.8310	1.48	| Q	|	|	| V |
18+10	3.8412	1.48	| Q	|	|	| V |
18+15	3.8514	1.48	| Q	|	|	| V |
18+20	3.8616	1.48	| Q	|	|	| V |
18+25	3.8718	1.48	| Q	|	|	| V |
18+30	3.8820	1.48	| Q	|	|	| V |
18+35	3.8919	1.43	| Q	|	|	| V |
18+40	3.9013	1.38	| Q	|	|	| V |
18+45	3.9108	1.37	| Q	|	|	| V |
18+50	3.9198	1.31	| Q	|	|	| V |
18+55	3.9285	1.26	| Q	|	|	| V |
19+ 0	3.9370	1.25	| Q	|	|	| V |
19+ 5	3.9460	1.29	| Q	|	|	| V |
19+10	3.9552	1.35	| Q	|	|	| V |
19+15	3.9646	1.36	| Q	|	|	| V |
19+20	3.9743	1.41	| Q	|	|	| V |
19+25	3.9844	1.47	| Q	|	|	| V |
19+30	3.9946	1.48	| Q	|	|	| V |
19+35	4.0044	1.43	| Q	|	|	| V |
19+40	4.0139	1.38	| Q	|	|	| V |
19+45	4.0233	1.37	| Q	|	|	| V |
19+50	4.0324	1.31	| Q	|	|	| V |
19+55	4.0410	1.26	| Q	|	|	| V |
20+ 0	4.0496	1.25	| Q	|	|	| V |
20+ 5	4.0585	1.29	| Q	|	|	| V |
20+10	4.0678	1.35	| Q	|	|	| V |
20+15	4.0771	1.36	| Q	|	|	| V |
20+20	4.0865	1.36	| Q	|	|	| V |
20+25	4.0959	1.36	| Q	|	|	| V |

20+30	4.1053	1.36	Q				V
20+35	4.1146	1.36	Q				V
20+40	4.1240	1.36	Q				V
20+45	4.1334	1.36	Q				V
20+50	4.1424	1.31	Q				V
20+55	4.1511	1.26	Q				V
21+ 0	4.1597	1.25	Q				V
21+ 5	4.1686	1.29	Q				V
21+10	4.1778	1.35	Q				V
21+15	4.1872	1.36	Q				V
21+20	4.1962	1.31	Q				V
21+25	4.2049	1.26	Q				V
21+30	4.2134	1.25	Q				V
21+35	4.2224	1.29	Q				V
21+40	4.2316	1.35	Q				V
21+45	4.2410	1.36	Q				V
21+50	4.2500	1.31	Q				V
21+55	4.2586	1.26	Q				V
22+ 0	4.2672	1.25	Q				V
22+ 5	4.2762	1.29	Q				V
22+10	4.2854	1.35	Q				V
22+15	4.2948	1.36	Q				V
22+20	4.3038	1.31	Q				V
22+25	4.3124	1.26	Q				V
22+30	4.3210	1.25	Q				V
22+35	4.3296	1.24	Q				V
22+40	4.3381	1.24	Q				V
22+45	4.3467	1.24	Q				V
22+50	4.3552	1.24	Q				V
22+55	4.3638	1.24	Q				V
23+ 0	4.3723	1.24	Q				V
23+ 5	4.3809	1.24	Q				V
23+10	4.3894	1.24	Q				V
23+15	4.3980	1.24	Q				V
23+20	4.4065	1.24	Q				V
23+25	4.4151	1.24	Q				V
23+30	4.4236	1.24	Q				V
23+35	4.4322	1.24	Q				V
23+40	4.4407	1.24	Q				V
23+45	4.4493	1.24	Q				V
23+50	4.4578	1.24	Q				V
23+55	4.4664	1.24	Q				V
24+ 0	4.4749	1.24	Q				V
24+ 5	4.4827	1.14	Q				V
24+10	4.4898	1.03	Q				V
24+15	4.4968	1.01	Q				V
24+20	4.5037	1.00	Q				V

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/31/22 File: 20750BPB24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
Proposed Area B
100 year 24 hour

Drainage Area = 22.80(Ac.) = 0.036 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 22.80(Ac.) = 0.036 Sq. Mi.
Length along longest watercourse = 1736.00(Ft.)
Length along longest watercourse measured to centroid = 355.00(Ft.)
Length along longest watercourse = 0.329 Mi.
Length along longest watercourse measured to centroid = 0.067 Mi.
Difference in elevation = 13.50(Ft.)
Slope along watercourse = 41.0599 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.042 Hr.
Lag time = 2.51 Min.
25% of lag time = 0.63 Min.
40% of lag time = 1.00 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
22.80	1.60	36.48

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
22.80	4.00	91.20

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
22.800	69.00	0.900

Total Area Entered = 22.80(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	84.4	0.194	0.900	0.037	1.000	0.037
					Sum (F) =	0.037

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Note: User entry of the f value
Soil low loss rate (decimal) = 0.180

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)	Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	199.596	43.331	9.957
2	0.167	399.192	43.396	9.972
3	0.250	598.788	8.810	2.024
4	0.333	798.384	3.422	0.786
5	0.417	997.980	1.040	0.239
		Sum = 100.000	Sum=	22.978

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max	Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.193)	0.006	0.026
2	0.17	0.07	0.032	(0.193)	0.006	0.026
3	0.25	0.07	0.032	(0.192)	0.006	0.026
4	0.33	0.10	0.048	(0.191)	0.009	0.039
5	0.42	0.10	0.048	(0.190)	0.009	0.039
6	0.50	0.10	0.048	(0.190)	0.009	0.039
7	0.58	0.10	0.048	(0.189)	0.009	0.039
8	0.67	0.10	0.048	(0.188)	0.009	0.039
9	0.75	0.10	0.048	(0.187)	0.009	0.039
10	0.83	0.13	0.064	(0.187)	0.012	0.052
11	0.92	0.13	0.064	(0.186)	0.012	0.052
12	1.00	0.13	0.064	(0.185)	0.012	0.052
13	1.08	0.10	0.048	(0.184)	0.009	0.039

14	1.17	0.10	0.048	(0.184)	0.009	0.039
15	1.25	0.10	0.048	(0.183)	0.009	0.039
16	1.33	0.10	0.048	(0.182)	0.009	0.039
17	1.42	0.10	0.048	(0.182)	0.009	0.039
18	1.50	0.10	0.048	(0.181)	0.009	0.039
19	1.58	0.10	0.048	(0.180)	0.009	0.039
20	1.67	0.10	0.048	(0.179)	0.009	0.039
21	1.75	0.10	0.048	(0.179)	0.009	0.039
22	1.83	0.13	0.064	(0.178)	0.012	0.052
23	1.92	0.13	0.064	(0.177)	0.012	0.052
24	2.00	0.13	0.064	(0.176)	0.012	0.052
25	2.08	0.13	0.064	(0.176)	0.012	0.052
26	2.17	0.13	0.064	(0.175)	0.012	0.052
27	2.25	0.13	0.064	(0.174)	0.012	0.052
28	2.33	0.13	0.064	(0.174)	0.012	0.052
29	2.42	0.13	0.064	(0.173)	0.012	0.052
30	2.50	0.13	0.064	(0.172)	0.012	0.052
31	2.58	0.17	0.080	(0.172)	0.014	0.066
32	2.67	0.17	0.080	(0.171)	0.014	0.066
33	2.75	0.17	0.080	(0.170)	0.014	0.066
34	2.83	0.17	0.080	(0.169)	0.014	0.066
35	2.92	0.17	0.080	(0.169)	0.014	0.066
36	3.00	0.17	0.080	(0.168)	0.014	0.066
37	3.08	0.17	0.080	(0.167)	0.014	0.066
38	3.17	0.17	0.080	(0.167)	0.014	0.066
39	3.25	0.17	0.080	(0.166)	0.014	0.066
40	3.33	0.17	0.080	(0.165)	0.014	0.066
41	3.42	0.17	0.080	(0.165)	0.014	0.066
42	3.50	0.17	0.080	(0.164)	0.014	0.066
43	3.58	0.17	0.080	(0.163)	0.014	0.066
44	3.67	0.17	0.080	(0.162)	0.014	0.066
45	3.75	0.17	0.080	(0.162)	0.014	0.066
46	3.83	0.20	0.096	(0.161)	0.017	0.079
47	3.92	0.20	0.096	(0.160)	0.017	0.079
48	4.00	0.20	0.096	(0.160)	0.017	0.079
49	4.08	0.20	0.096	(0.159)	0.017	0.079
50	4.17	0.20	0.096	(0.158)	0.017	0.079
51	4.25	0.20	0.096	(0.158)	0.017	0.079
52	4.33	0.23	0.112	(0.157)	0.020	0.092
53	4.42	0.23	0.112	(0.156)	0.020	0.092
54	4.50	0.23	0.112	(0.156)	0.020	0.092
55	4.58	0.23	0.112	(0.155)	0.020	0.092
56	4.67	0.23	0.112	(0.154)	0.020	0.092
57	4.75	0.23	0.112	(0.154)	0.020	0.092
58	4.83	0.27	0.128	(0.153)	0.023	0.105
59	4.92	0.27	0.128	(0.152)	0.023	0.105
60	5.00	0.27	0.128	(0.152)	0.023	0.105
61	5.08	0.20	0.096	(0.151)	0.017	0.079
62	5.17	0.20	0.096	(0.150)	0.017	0.079
63	5.25	0.20	0.096	(0.150)	0.017	0.079
64	5.33	0.23	0.112	(0.149)	0.020	0.092
65	5.42	0.23	0.112	(0.148)	0.020	0.092
66	5.50	0.23	0.112	(0.148)	0.020	0.092
67	5.58	0.27	0.128	(0.147)	0.023	0.105
68	5.67	0.27	0.128	(0.147)	0.023	0.105
69	5.75	0.27	0.128	(0.146)	0.023	0.105
70	5.83	0.27	0.128	(0.145)	0.023	0.105
71	5.92	0.27	0.128	(0.145)	0.023	0.105
72	6.00	0.27	0.128	(0.144)	0.023	0.105
73	6.08	0.30	0.144	(0.143)	0.026	0.118

74	6.17	0.30	0.144	(0.143)	0.026	0.118
75	6.25	0.30	0.144	(0.142)	0.026	0.118
76	6.33	0.30	0.144	(0.141)	0.026	0.118
77	6.42	0.30	0.144	(0.141)	0.026	0.118
78	6.50	0.30	0.144	(0.140)	0.026	0.118
79	6.58	0.33	0.160	(0.140)	0.029	0.131
80	6.67	0.33	0.160	(0.139)	0.029	0.131
81	6.75	0.33	0.160	(0.138)	0.029	0.131
82	6.83	0.33	0.160	(0.138)	0.029	0.131
83	6.92	0.33	0.160	(0.137)	0.029	0.131
84	7.00	0.33	0.160	(0.136)	0.029	0.131
85	7.08	0.33	0.160	(0.136)	0.029	0.131
86	7.17	0.33	0.160	(0.135)	0.029	0.131
87	7.25	0.33	0.160	(0.135)	0.029	0.131
88	7.33	0.37	0.176	(0.134)	0.032	0.144
89	7.42	0.37	0.176	(0.133)	0.032	0.144
90	7.50	0.37	0.176	(0.133)	0.032	0.144
91	7.58	0.40	0.192	(0.132)	0.035	0.157
92	7.67	0.40	0.192	(0.131)	0.035	0.157
93	7.75	0.40	0.192	(0.131)	0.035	0.157
94	7.83	0.43	0.208	(0.130)	0.037	0.171
95	7.92	0.43	0.208	(0.130)	0.037	0.171
96	8.00	0.43	0.208	(0.129)	0.037	0.171
97	8.08	0.50	0.240	(0.128)	0.043	0.197
98	8.17	0.50	0.240	(0.128)	0.043	0.197
99	8.25	0.50	0.240	(0.127)	0.043	0.197
100	8.33	0.50	0.240	(0.127)	0.043	0.197
101	8.42	0.50	0.240	(0.126)	0.043	0.197
102	8.50	0.50	0.240	(0.125)	0.043	0.197
103	8.58	0.53	0.256	(0.125)	0.046	0.210
104	8.67	0.53	0.256	(0.124)	0.046	0.210
105	8.75	0.53	0.256	(0.124)	0.046	0.210
106	8.83	0.57	0.272	(0.123)	0.049	0.223
107	8.92	0.57	0.272	(0.123)	0.049	0.223
108	9.00	0.57	0.272	(0.122)	0.049	0.223
109	9.08	0.63	0.304	(0.121)	0.055	0.249
110	9.17	0.63	0.304	(0.121)	0.055	0.249
111	9.25	0.63	0.304	(0.120)	0.055	0.249
112	9.33	0.67	0.320	(0.120)	0.058	0.262
113	9.42	0.67	0.320	(0.119)	0.058	0.262
114	9.50	0.67	0.320	(0.119)	0.058	0.262
115	9.58	0.70	0.336	(0.118)	0.060	0.276
116	9.67	0.70	0.336	(0.117)	0.060	0.276
117	9.75	0.70	0.336	(0.117)	0.060	0.276
118	9.83	0.73	0.352	(0.116)	0.063	0.289
119	9.92	0.73	0.352	(0.116)	0.063	0.289
120	10.00	0.73	0.352	(0.115)	0.063	0.289
121	10.08	0.50	0.240	(0.115)	0.043	0.197
122	10.17	0.50	0.240	(0.114)	0.043	0.197
123	10.25	0.50	0.240	(0.113)	0.043	0.197
124	10.33	0.50	0.240	(0.113)	0.043	0.197
125	10.42	0.50	0.240	(0.112)	0.043	0.197
126	10.50	0.50	0.240	(0.112)	0.043	0.197
127	10.58	0.67	0.320	(0.111)	0.058	0.262
128	10.67	0.67	0.320	(0.111)	0.058	0.262
129	10.75	0.67	0.320	(0.110)	0.058	0.262
130	10.83	0.67	0.320	(0.110)	0.058	0.262
131	10.92	0.67	0.320	(0.109)	0.058	0.262
132	11.00	0.67	0.320	(0.109)	0.058	0.262
133	11.08	0.63	0.304	(0.108)	0.055	0.249

134	11.17	0.63	0.304	(0.108)	0.055	0.249
135	11.25	0.63	0.304	(0.107)	0.055	0.249
136	11.33	0.63	0.304	(0.106)	0.055	0.249
137	11.42	0.63	0.304	(0.106)	0.055	0.249
138	11.50	0.63	0.304	(0.105)	0.055	0.249
139	11.58	0.57	0.272	(0.105)	0.049	0.223
140	11.67	0.57	0.272	(0.104)	0.049	0.223
141	11.75	0.57	0.272	(0.104)	0.049	0.223
142	11.83	0.60	0.288	(0.103)	0.052	0.236
143	11.92	0.60	0.288	(0.103)	0.052	0.236
144	12.00	0.60	0.288	(0.102)	0.052	0.236
145	12.08	0.83	0.400	(0.102)	0.072	0.328
146	12.17	0.83	0.400	(0.101)	0.072	0.328
147	12.25	0.83	0.400	(0.101)	0.072	0.328
148	12.33	0.87	0.416	(0.100)	0.075	0.341
149	12.42	0.87	0.416	(0.100)	0.075	0.341
150	12.50	0.87	0.416	(0.099)	0.075	0.341
151	12.58	0.93	0.448	(0.099)	0.081	0.367
152	12.67	0.93	0.448	(0.098)	0.081	0.367
153	12.75	0.93	0.448	(0.098)	0.081	0.367
154	12.83	0.97	0.464	(0.097)	0.084	0.380
155	12.92	0.97	0.464	(0.097)	0.084	0.380
156	13.00	0.97	0.464	(0.096)	0.084	0.380
157	13.08	1.13	0.544	0.096	(0.098)	0.448
158	13.17	1.13	0.544	0.095	(0.098)	0.449
159	13.25	1.13	0.544	0.095	(0.098)	0.449
160	13.33	1.13	0.544	0.094	(0.098)	0.450
161	13.42	1.13	0.544	0.094	(0.098)	0.450
162	13.50	1.13	0.544	0.093	(0.098)	0.451
163	13.58	0.77	0.368	(0.093)	0.066	0.302
164	13.67	0.77	0.368	(0.092)	0.066	0.302
165	13.75	0.77	0.368	(0.092)	0.066	0.302
166	13.83	0.77	0.368	(0.092)	0.066	0.302
167	13.92	0.77	0.368	(0.091)	0.066	0.302
168	14.00	0.77	0.368	(0.091)	0.066	0.302
169	14.08	0.90	0.432	(0.090)	0.078	0.354
170	14.17	0.90	0.432	(0.090)	0.078	0.354
171	14.25	0.90	0.432	(0.089)	0.078	0.354
172	14.33	0.87	0.416	(0.089)	0.075	0.341
173	14.42	0.87	0.416	(0.088)	0.075	0.341
174	14.50	0.87	0.416	(0.088)	0.075	0.341
175	14.58	0.87	0.416	(0.087)	0.075	0.341
176	14.67	0.87	0.416	(0.087)	0.075	0.341
177	14.75	0.87	0.416	(0.086)	0.075	0.341
178	14.83	0.83	0.400	(0.086)	0.072	0.328
179	14.92	0.83	0.400	(0.086)	0.072	0.328
180	15.00	0.83	0.400	(0.085)	0.072	0.328
181	15.08	0.80	0.384	(0.085)	0.069	0.315
182	15.17	0.80	0.384	(0.084)	0.069	0.315
183	15.25	0.80	0.384	(0.084)	0.069	0.315
184	15.33	0.77	0.368	(0.083)	0.066	0.302
185	15.42	0.77	0.368	(0.083)	0.066	0.302
186	15.50	0.77	0.368	(0.083)	0.066	0.302
187	15.58	0.63	0.304	(0.082)	0.055	0.249
188	15.67	0.63	0.304	(0.082)	0.055	0.249
189	15.75	0.63	0.304	(0.081)	0.055	0.249
190	15.83	0.63	0.304	(0.081)	0.055	0.249
191	15.92	0.63	0.304	(0.080)	0.055	0.249
192	16.00	0.63	0.304	(0.080)	0.055	0.249
193	16.08	0.13	0.064	(0.080)	0.012	0.052

194	16.17	0.13	0.064	(0.079)	0.012	0.052
195	16.25	0.13	0.064	(0.079)	0.012	0.052
196	16.33	0.13	0.064	(0.078)	0.012	0.052
197	16.42	0.13	0.064	(0.078)	0.012	0.052
198	16.50	0.13	0.064	(0.078)	0.012	0.052
199	16.58	0.10	0.048	(0.077)	0.009	0.039
200	16.67	0.10	0.048	(0.077)	0.009	0.039
201	16.75	0.10	0.048	(0.076)	0.009	0.039
202	16.83	0.10	0.048	(0.076)	0.009	0.039
203	16.92	0.10	0.048	(0.076)	0.009	0.039
204	17.00	0.10	0.048	(0.075)	0.009	0.039
205	17.08	0.17	0.080	(0.075)	0.014	0.066
206	17.17	0.17	0.080	(0.075)	0.014	0.066
207	17.25	0.17	0.080	(0.074)	0.014	0.066
208	17.33	0.17	0.080	(0.074)	0.014	0.066
209	17.42	0.17	0.080	(0.073)	0.014	0.066
210	17.50	0.17	0.080	(0.073)	0.014	0.066
211	17.58	0.17	0.080	(0.073)	0.014	0.066
212	17.67	0.17	0.080	(0.072)	0.014	0.066
213	17.75	0.17	0.080	(0.072)	0.014	0.066
214	17.83	0.13	0.064	(0.072)	0.012	0.052
215	17.92	0.13	0.064	(0.071)	0.012	0.052
216	18.00	0.13	0.064	(0.071)	0.012	0.052
217	18.08	0.13	0.064	(0.071)	0.012	0.052
218	18.17	0.13	0.064	(0.070)	0.012	0.052
219	18.25	0.13	0.064	(0.070)	0.012	0.052
220	18.33	0.13	0.064	(0.070)	0.012	0.052
221	18.42	0.13	0.064	(0.069)	0.012	0.052
222	18.50	0.13	0.064	(0.069)	0.012	0.052
223	18.58	0.10	0.048	(0.069)	0.009	0.039
224	18.67	0.10	0.048	(0.068)	0.009	0.039
225	18.75	0.10	0.048	(0.068)	0.009	0.039
226	18.83	0.07	0.032	(0.068)	0.006	0.026
227	18.92	0.07	0.032	(0.067)	0.006	0.026
228	19.00	0.07	0.032	(0.067)	0.006	0.026
229	19.08	0.10	0.048	(0.067)	0.009	0.039
230	19.17	0.10	0.048	(0.066)	0.009	0.039
231	19.25	0.10	0.048	(0.066)	0.009	0.039
232	19.33	0.13	0.064	(0.066)	0.012	0.052
233	19.42	0.13	0.064	(0.065)	0.012	0.052
234	19.50	0.13	0.064	(0.065)	0.012	0.052
235	19.58	0.10	0.048	(0.065)	0.009	0.039
236	19.67	0.10	0.048	(0.064)	0.009	0.039
237	19.75	0.10	0.048	(0.064)	0.009	0.039
238	19.83	0.07	0.032	(0.064)	0.006	0.026
239	19.92	0.07	0.032	(0.064)	0.006	0.026
240	20.00	0.07	0.032	(0.063)	0.006	0.026
241	20.08	0.10	0.048	(0.063)	0.009	0.039
242	20.17	0.10	0.048	(0.063)	0.009	0.039
243	20.25	0.10	0.048	(0.062)	0.009	0.039
244	20.33	0.10	0.048	(0.062)	0.009	0.039
245	20.42	0.10	0.048	(0.062)	0.009	0.039
246	20.50	0.10	0.048	(0.062)	0.009	0.039
247	20.58	0.10	0.048	(0.061)	0.009	0.039
248	20.67	0.10	0.048	(0.061)	0.009	0.039
249	20.75	0.10	0.048	(0.061)	0.009	0.039
250	20.83	0.07	0.032	(0.061)	0.006	0.026
251	20.92	0.07	0.032	(0.060)	0.006	0.026
252	21.00	0.07	0.032	(0.060)	0.006	0.026
253	21.08	0.10	0.048	(0.060)	0.009	0.039

254	21.17	0.10	0.048	(0.060)	0.009	0.039
255	21.25	0.10	0.048	(0.059)	0.009	0.039
256	21.33	0.07	0.032	(0.059)	0.006	0.026
257	21.42	0.07	0.032	(0.059)	0.006	0.026
258	21.50	0.07	0.032	(0.059)	0.006	0.026
259	21.58	0.10	0.048	(0.059)	0.009	0.039
260	21.67	0.10	0.048	(0.058)	0.009	0.039
261	21.75	0.10	0.048	(0.058)	0.009	0.039
262	21.83	0.07	0.032	(0.058)	0.006	0.026
263	21.92	0.07	0.032	(0.058)	0.006	0.026
264	22.00	0.07	0.032	(0.058)	0.006	0.026
265	22.08	0.10	0.048	(0.057)	0.009	0.039
266	22.17	0.10	0.048	(0.057)	0.009	0.039
267	22.25	0.10	0.048	(0.057)	0.009	0.039
268	22.33	0.07	0.032	(0.057)	0.006	0.026
269	22.42	0.07	0.032	(0.057)	0.006	0.026
270	22.50	0.07	0.032	(0.057)	0.006	0.026
271	22.58	0.07	0.032	(0.056)	0.006	0.026
272	22.67	0.07	0.032	(0.056)	0.006	0.026
273	22.75	0.07	0.032	(0.056)	0.006	0.026
274	22.83	0.07	0.032	(0.056)	0.006	0.026
275	22.92	0.07	0.032	(0.056)	0.006	0.026
276	23.00	0.07	0.032	(0.056)	0.006	0.026
277	23.08	0.07	0.032	(0.055)	0.006	0.026
278	23.17	0.07	0.032	(0.055)	0.006	0.026
279	23.25	0.07	0.032	(0.055)	0.006	0.026
280	23.33	0.07	0.032	(0.055)	0.006	0.026
281	23.42	0.07	0.032	(0.055)	0.006	0.026
282	23.50	0.07	0.032	(0.055)	0.006	0.026
283	23.58	0.07	0.032	(0.055)	0.006	0.026
284	23.67	0.07	0.032	(0.055)	0.006	0.026
285	23.75	0.07	0.032	(0.055)	0.006	0.026
286	23.83	0.07	0.032	(0.055)	0.006	0.026
287	23.92	0.07	0.032	(0.055)	0.006	0.026
288	24.00	0.07	0.032	(0.055)	0.006	0.026

(Loss Rate Not Used)

Sum = 100.0 Sum = 39.4

Flood volume = Effective rainfall 3.28(In)
times area 22.8(Ac.)/[(In)/(Ft.)] = 6.2(Ac.Ft)
Total soil loss = 0.72(In)
Total soil loss = 1.365(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 271590.8 Cubic Feet
Total soil loss = 59450.5 Cubic Feet

Peak flow rate of this hydrograph = 10.350(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	5.0	10.0	15.0	20.0
0+ 5	0.0018	0.26	Q	|	|	|	|
0+10	0.0054	0.52	VQ	|	|	|	|
0+15	0.0094	0.58	VQ	|	|	|	|
0+20	0.0144	0.73	VQ	|	|	|	|

0+25	0.0203	0.86	VQ	|	|	|	|
0+30	0.0265	0.89	VQ	|	|	|	|
0+35	0.0327	0.90	VQ	|	|	|	|
0+40	0.0389	0.90	VQ	|	|	|	|
0+45	0.0452	0.90	VQ	|	|	|	|
0+50	0.0523	1.04	V Q	|	|	|	|
0+55	0.0603	1.17	V Q	|	|	|	|
1+ 0	0.0685	1.19	V Q	|	|	|	|
1+ 5	0.0759	1.07	V Q	|	|	|	|
1+10	0.0824	0.94	VQ	|	|	|	|
1+15	0.0888	0.92	VQ	|	|	|	|
1+20	0.0950	0.91	VQ	|	|	|	|
1+25	0.1012	0.90	VQ	|	|	|	|
1+30	0.1075	0.90	VQ	|	|	|	|
1+35	0.1137	0.90	VQ	|	|	|	|
1+40	0.1199	0.90	VQ	|	|	|	|
1+45	0.1262	0.90	VQ	|	|	|	|
1+50	0.1333	1.04	V Q	|	|	|	|
1+55	0.1413	1.17	V Q	|	|	|	|
2+ 0	0.1495	1.19	V Q	|	|	|	|
2+ 5	0.1578	1.20	|VQ	|	|	|	|
2+10	0.1661	1.21	|VQ	|	|	|	|
2+15	0.1745	1.21	|VQ	|	|	|	|
2+20	0.1828	1.21	|VQ	|	|	|	|
2+25	0.1911	1.21	|VQ	|	|	|	|
2+30	0.1994	1.21	|VQ	|	|	|	|
2+35	0.2086	1.34	|VQ	|	|	|	|
2+40	0.2187	1.47	|VQ	|	|	|	|
2+45	0.2290	1.49	|VQ	|	|	|	|
2+50	0.2394	1.50	|V Q	|	|	|	|
2+55	0.2497	1.51	|V Q	|	|	|	|
3+ 0	0.2601	1.51	|V Q	|	|	|	|
3+ 5	0.2705	1.51	|V Q	|	|	|	|
3+10	0.2809	1.51	|V Q	|	|	|	|
3+15	0.2913	1.51	|V Q	|	|	|	|
3+20	0.3017	1.51	|V Q	|	|	|	|
3+25	0.3121	1.51	| VQ	|	|	|	|
3+30	0.3224	1.51	| VQ	|	|	|	|
3+35	0.3328	1.51	| VQ	|	|	|	|
3+40	0.3432	1.51	| VQ	|	|	|	|
3+45	0.3536	1.51	| VQ	|	|	|	|
3+50	0.3649	1.64	| VQ	|	|	|	|
3+55	0.3771	1.77	| VQ	|	|	|	|
4+ 0	0.3894	1.80	| VQ	|	|	|	|
4+ 5	0.4019	1.81	| VQ	|	|	|	|
4+10	0.4144	1.81	| VQ	|	|	|	|
4+15	0.4268	1.81	| VQ	|	|	|	|
4+20	0.4402	1.94	| VQ	|	|	|	|
4+25	0.4544	2.07	| V Q	|	|	|	|
4+30	0.4689	2.10	| VQ	|	|	|	|
4+35	0.4834	2.11	| VQ	|	|	|	|
4+40	0.4980	2.11	| VQ	|	|	|	|
4+45	0.5125	2.11	| VQ	|	|	|	|
4+50	0.5279	2.24	| VQ	|	|	|	|
4+55	0.5443	2.37	| VQ	|	|	|	|
5+ 0	0.5608	2.40	| VQ	|	|	|	|
5+ 5	0.5756	2.15	| VQ	|	|	|	|
5+10	0.5886	1.89	| Q	|	|	|	|
5+15	0.6013	1.84	| Q	|	|	|	|
5+20	0.6147	1.95	| Q	|	|	|	|

5+25	0.6289	2.07	Q	|	|	|	|
5+30	0.6434	2.10	Q	|	|	|	|
5+35	0.6588	2.24	Q	|	|	|	|
5+40	0.6751	2.37	Q	|	|	|	|
5+45	0.6917	2.40	Q	|	|	|	|
5+50	0.7083	2.41	Q	|	|	|	|
5+55	0.7249	2.41	Q	|	|	|	|
6+ 0	0.7415	2.41	Q	|	|	|	|
6+ 5	0.7590	2.54	VQ	|	|	|	|
6+10	0.7774	2.67	VQ	|	|	|	|
6+15	0.7960	2.70	Q	|	|	|	|
6+20	0.8147	2.71	Q	|	|	|	|
6+25	0.8334	2.71	Q	|	|	|	|
6+30	0.8521	2.71	Q	|	|	|	|
6+35	0.8717	2.85	Q	|	|	|	|
6+40	0.8922	2.98	Q	|	|	|	|
6+45	0.9129	3.00	VQ	|	|	|	|
6+50	0.9336	3.01	VQ	|	|	|	|
6+55	0.9544	3.02	Q	|	|	|	|
7+ 0	0.9752	3.02	Q	|	|	|	|
7+ 5	0.9959	3.02	Q	|	|	|	|
7+10	1.0167	3.02	Q	|	|	|	|
7+15	1.0375	3.02	Q	|	|	|	|
7+20	1.0592	3.15	Q	|	|	|	|
7+25	1.0817	3.28	Q	|	|	|	|
7+30	1.1045	3.30	QV	|	|	|	|
7+35	1.1282	3.45	QV	|	|	|	|
7+40	1.1529	3.58	Q	|	|	|	|
7+45	1.1777	3.61	Q	|	|	|	|
7+50	1.2035	3.75	Q	|	|	|	|
7+55	1.2302	3.88	Q	|	|	|	|
8+ 0	1.2572	3.91	QV	|	|	|	|
8+ 5	1.2859	4.18	Q	|	|	|	|
8+10	1.3165	4.44	Q	|	|	|	|
8+15	1.3475	4.50	Q	|	|	|	|
8+20	1.3786	4.52	VQ	|	|	|	|
8+25	1.4098	4.52	Q	|	|	|	|
8+30	1.4409	4.52	Q	|	|	|	|
8+35	1.4730	4.65	Q	|	|	|	|
8+40	1.5060	4.79	Q	|	|	|	|
8+45	1.5391	4.81	Q	|	|	|	|
8+50	1.5732	4.95	QV	|	|	|	|
8+55	1.6083	5.09	Q	|	|	|	|
9+ 0	1.6435	5.11	Q	|	|	|	|
9+ 5	1.6806	5.39	Q	|	|	|	|
9+10	1.7195	5.65	|	Q	|	|	|
9+15	1.7588	5.70	|	Q	|	|	|
9+20	1.7991	5.86	|	Q	|	|	|
9+25	1.8404	5.99	|	Q	|	|	|
9+30	1.8818	6.02	|	Q	|	|	|
9+35	1.9242	6.16	|	Q	|	|	|
9+40	1.9676	6.29	|	Q	|	|	|
9+45	2.0111	6.32	|	Q	|	|	|
9+50	2.0556	6.46	|	QV	|	|	|
9+55	2.1010	6.60	|	Q	|	|	|
10+ 0	2.1466	6.62	|	Q	|	|	|
10+ 5	2.1860	5.72	|	Q	V	|	|
10+10	2.2191	4.80	Q	|	V	|	|
10+15	2.2509	4.62	Q	|	V	|	|
10+20	2.2822	4.55	Q	|	V	|	|

10+25	2.3134	4.52	Q| V	|	|	|
10+30	2.3445	4.52	Q| V	|	|	|
10+35	2.3802	5.18	Q V	|	|	|
10+40	2.4204	5.83	|Q V	|	|	|
10+45	2.4615	5.97	|Q V	|	|	|
10+50	2.5029	6.02	| Q V	|	|	|
10+55	2.5444	6.03	| Q V	|	|	|
11+ 0	2.5860	6.03	| Q V	|	|	|
11+ 5	2.6266	5.90	|Q V	|	|	|
11+10	2.6664	5.77	|Q V	|	|	|
11+15	2.7059	5.74	|Q V	|	|	|
11+20	2.7454	5.73	|Q V	|	|	|
11+25	2.7849	5.73	|Q V	|	|	|
11+30	2.8244	5.73	|Q V	|	|	|
11+35	2.8620	5.47	Q V	|	|	|
11+40	2.8979	5.21	Q V	|	|	|
11+45	2.9334	5.15	Q V	|	|	|
11+50	2.9696	5.26	Q V|	|	|	|
11+55	3.0068	5.39	Q V|	|	|	|
12+ 0	3.0441	5.42	Q V|	|	|	|
12+ 5	3.0877	6.34	| Q V|	|	|	|
12+10	3.1377	7.26	| Q V	|	|	|
12+15	3.1890	7.45	| Q V	|	|	|
12+20	3.2417	7.65	| Q V	|	|	|
12+25	3.2954	7.80	| Q |V	|	|	|
12+30	3.3493	7.83	| Q |V	|	|	|
12+35	3.4051	8.10	| Q |V	|	|	|
12+40	3.4627	8.37	| Q | V	|	|	|
12+45	3.5207	8.42	| Q | V	|	|	|
12+50	3.5797	8.57	| Q | V	|	|	|
12+55	3.6397	8.71	| Q | V	|	|	|
13+ 0	3.6998	8.73	| Q | V	|	|	|
13+ 5	3.7647	9.42	| Q | V	|	|	|
13+10	3.8343	10.10	| Q V	|	|	|
13+15	3.9049	10.25	| Q V	|	|	|
13+20	3.9759	10.31	| Q V	|	|	|
13+25	4.0471	10.34	| Q V	|	|	|
13+30	4.1184	10.35	| Q V	|	|	|
13+35	4.1795	8.87	| Q | V	|	|	|
13+40	4.2304	7.39	| Q | V	|	|	|
13+45	4.2792	7.09	| Q | V	|	|	|
13+50	4.3272	6.97	| Q | V	|	|	|
13+55	4.3750	6.94	| Q | V	|	|	|
14+ 0	4.4228	6.94	| Q | V	|	|	|
14+ 5	4.4742	7.46	| Q | V	|	|	|
14+10	4.5291	7.98	| Q | V|	|	|	|
14+15	4.5849	8.09	| Q | V|	|	|	|
14+20	4.6400	8.00	| Q | V|	|	|	|
14+25	4.6942	7.88	| Q | V	|	|	|
14+30	4.7483	7.86	| Q | V	|	|	|
14+35	4.8024	7.85	| Q | V	|	|	|
14+40	4.8564	7.84	| Q | |V	|	|	|
14+45	4.9104	7.84	| Q | |V	|	|	|
14+50	4.9635	7.71	| Q | |V	|	|	|
14+55	5.0157	7.58	| Q | | V	|	|	|
15+ 0	5.0677	7.55	| Q | | V	|	|	|
15+ 5	5.1188	7.41	| Q | | V	|	|	|
15+10	5.1689	7.28	| Q | | V	|	|	|
15+15	5.2189	7.25	| Q | | V	|	|	|
15+20	5.2678	7.11	| Q | | V	|	|	|

15+25	5.3159	6.98	|	Q	|	V	|
15+30	5.3637	6.95	|	Q	|	V	|
15+35	5.4079	6.42	|	Q	|	V	|
15+40	5.4485	5.89	|	Q	|	V	|
15+45	5.4884	5.78	|	Q	|	V	|
15+50	5.5279	5.74	|	Q	|	V	|
15+55	5.5674	5.73	|	Q	|	V	|
16+ 0	5.6068	5.73	|	Q	|	V	|
16+ 5	5.6328	3.77	|	Q	|	V	|
16+10	5.6453	1.81	|	Q	|	V	|
16+15	5.6550	1.41	|	Q	|	V	|
16+20	5.6636	1.25	|	Q	|	V	|
16+25	5.6719	1.21	|	Q	|	V	|
16+30	5.6802	1.21	|	Q	|	V	|
16+35	5.6876	1.08	|	Q	|	V	|
16+40	5.6941	0.94	|	Q	|	V	|
16+45	5.7004	0.92	|	Q	|	V	|
16+50	5.7067	0.91	|	Q	|	V	|
16+55	5.7129	0.90	|	Q	|	V	|
17+ 0	5.7192	0.90	|	Q	|	V	|
17+ 5	5.7272	1.17	|	Q	|	V	|
17+10	5.7370	1.43	|	Q	|	V	|
17+15	5.7472	1.48	|	Q	|	V	|
17+20	5.7576	1.50	|	Q	|	V	|
17+25	5.7680	1.51	|	Q	|	V	|
17+30	5.7783	1.51	|	Q	|	V	|
17+35	5.7887	1.51	|	Q	|	V	|
17+40	5.7991	1.51	|	Q	|	V	|
17+45	5.8095	1.51	|	Q	|	V	|
17+50	5.8190	1.38	|	Q	|	V	|
17+55	5.8276	1.25	|	Q	|	V	|
18+ 0	5.8360	1.22	|	Q	|	V	|
18+ 5	5.8443	1.21	|	Q	|	V	|
18+10	5.8526	1.21	|	Q	|	V	|
18+15	5.8609	1.21	|	Q	|	V	|
18+20	5.8692	1.21	|	Q	|	V	|
18+25	5.8775	1.21	|	Q	|	V	|
18+30	5.8859	1.21	|	Q	|	V	|
18+35	5.8933	1.08	|	Q	|	V	|
18+40	5.8998	0.94	|	Q	|	V	|
18+45	5.9061	0.92	|	Q	|	V	|
18+50	5.9114	0.78	|	Q	|	V	|
18+55	5.9159	0.64	|	Q	|	V	|
19+ 0	5.9201	0.62	|	Q	|	V	|
19+ 5	5.9252	0.74	|	Q	|	V	|
19+10	5.9312	0.86	|	Q	|	V	|
19+15	5.9373	0.89	|	Q	|	V	|
19+20	5.9444	1.03	|	Q	|	V	|
19+25	5.9524	1.17	|	Q	|	V	|
19+30	5.9607	1.19	|	Q	|	V	|
19+35	5.9680	1.07	|	Q	|	V	|
19+40	5.9746	0.94	|	Q	|	V	|
19+45	5.9809	0.92	|	Q	|	V	|
19+50	5.9862	0.78	|	Q	|	V	|
19+55	5.9907	0.64	|	Q	|	V	|
20+ 0	5.9949	0.62	|	Q	|	V	|
20+ 5	6.0000	0.74	|	Q	|	V	|
20+10	6.0059	0.86	|	Q	|	V	|
20+15	6.0121	0.89	|	Q	|	V	|
20+20	6.0183	0.90	|	Q	|	V	|

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  20+25       6.0245      0.90  |Q        |         |         |        V |
  20+30       6.0307      0.90  |Q        |         |         |        V |
  20+35       6.0370      0.90  |Q        |         |         |        V |
  20+40       6.0432      0.90  |Q        |         |         |        V |
  20+45       6.0494      0.90  |Q        |         |         |        V |
  20+50       6.0548      0.77  |Q        |         |         |        V |
  20+55       6.0592      0.64  |Q        |         |         |        V |
  21+ 0       6.0635      0.62  |Q        |         |         |        V |
  21+ 5       6.0685      0.74  |Q        |         |         |        V |
  21+10       6.0745      0.86  |Q        |         |         |        V |
  21+15       6.0806      0.89  |Q        |         |         |         V|
  21+20       6.0859      0.77  |Q        |         |         |         V|
  21+25       6.0904      0.64  |Q        |         |         |         V|
  21+30       6.0946      0.62  |Q        |         |         |         V|
  21+35       6.0997      0.74  |Q        |         |         |         V|
  21+40       6.1056      0.86  |Q        |         |         |         V|
  21+45       6.1118      0.89  |Q        |         |         |         V|
  21+50       6.1171      0.77  |Q        |         |         |         V|
  21+55       6.1215      0.64  |Q        |         |         |         V|
  22+ 0       6.1258      0.62  |Q        |         |         |         V|
  22+ 5       6.1308      0.74  |Q        |         |         |         V|
  22+10       6.1368      0.86  |Q        |         |         |         V|
  22+15       6.1429      0.89  |Q        |         |         |         V|
  22+20       6.1483      0.77  |Q        |         |         |         V|
  22+25       6.1527      0.64  |Q        |         |         |         V|
  22+30       6.1569      0.62  |Q        |         |         |         V|
  22+35       6.1611      0.61  |Q        |         |         |         V|
  22+40       6.1653      0.60  |Q        |         |         |         V|
  22+45       6.1694      0.60  |Q        |         |         |         V|
  22+50       6.1736      0.60  |Q        |         |         |         V|
  22+55       6.1777      0.60  |Q        |         |         |         V|
  23+ 0       6.1819      0.60  |Q        |         |         |         V|
  23+ 5       6.1860      0.60  |Q        |         |         |         V|
  23+10       6.1902      0.60  |Q        |         |         |         V|
  23+15       6.1943      0.60  |Q        |         |         |         V|
  23+20       6.1985      0.60  |Q        |         |         |         V|
  23+25       6.2027      0.60  |Q        |         |         |         V|
  23+30       6.2068      0.60  |Q        |         |         |         V|
  23+35       6.2110      0.60  |Q        |         |         |         V|
  23+40       6.2151      0.60  |Q        |         |         |         V|
  23+45       6.2193      0.60  |Q        |         |         |         V|
  23+50       6.2234      0.60  |Q        |         |         |         V|
  23+55       6.2276      0.60  |Q        |         |         |         V|
  24+ 0       6.2317      0.60  |Q        |         |         |         V|
  24+ 5       6.2341      0.34  Q         |         |         |         V|
  24+10       6.2346      0.08  Q         |         |         |         V|
  24+15       6.2348      0.03  Q         |         |         |         V|
  24+20       6.2349      0.01  Q         |         |         |          V
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U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750BPC242.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
PROPOSED
2 YEAR 24 HOUR

Drainage Area = 23.70(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.70(Ac.) = 0.037 Sq. Mi.
Length along longest watercourse = 795.00(Ft.)
Length along longest watercourse measured to centroid = 475.00(Ft.)
Length along longest watercourse = 0.151 Mi.
Length along longest watercourse measured to centroid = 0.090 Mi.
Difference in elevation = 6.80(Ft.)
Slope along watercourse = 45.1623 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.034 Hr.
Lag time = 2.04 Min.
25% of lag time = 0.51 Min.
40% of lag time = 0.82 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.70	1.60	37.92

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.70	4.00	94.80

STORM EVENT (YEAR) = 2.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 1.600(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 1.600(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
23.700	69.00	0.900

Total Area Entered = 23.70(Ac.)

RI AMC2	RI AMC-1	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	49.8	0.574	0.900	0.109	1.000	0.109
					Sum (F) =	0.109

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Soil low loss rate (decimal) = 0.180

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	244.817	50.211	11.993
2	0.167	489.635	40.377	9.644
3	0.250	734.452	7.191	1.718
4	0.333	979.270	2.221	0.530
			Sum = 100.000	Sum= 23.885

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.013	(0.193)		0.002	0.010
2	0.17	0.07	0.013	(0.193)		0.002	0.010
3	0.25	0.07	0.013	(0.192)		0.002	0.010
4	0.33	0.10	0.019	(0.191)		0.003	0.016
5	0.42	0.10	0.019	(0.190)		0.003	0.016
6	0.50	0.10	0.019	(0.190)		0.003	0.016
7	0.58	0.10	0.019	(0.189)		0.003	0.016
8	0.67	0.10	0.019	(0.188)		0.003	0.016
9	0.75	0.10	0.019	(0.187)		0.003	0.016
10	0.83	0.13	0.026	(0.187)		0.005	0.021
11	0.92	0.13	0.026	(0.186)		0.005	0.021
12	1.00	0.13	0.026	(0.185)		0.005	0.021
13	1.08	0.10	0.019	(0.184)		0.003	0.016
14	1.17	0.10	0.019	(0.184)		0.003	0.016
15	1.25	0.10	0.019	(0.183)		0.003	0.016

16	1.33	0.10	0.019	(0.182)	0.003	0.016
17	1.42	0.10	0.019	(0.182)	0.003	0.016
18	1.50	0.10	0.019	(0.181)	0.003	0.016
19	1.58	0.10	0.019	(0.180)	0.003	0.016
20	1.67	0.10	0.019	(0.179)	0.003	0.016
21	1.75	0.10	0.019	(0.179)	0.003	0.016
22	1.83	0.13	0.026	(0.178)	0.005	0.021
23	1.92	0.13	0.026	(0.177)	0.005	0.021
24	2.00	0.13	0.026	(0.176)	0.005	0.021
25	2.08	0.13	0.026	(0.176)	0.005	0.021
26	2.17	0.13	0.026	(0.175)	0.005	0.021
27	2.25	0.13	0.026	(0.174)	0.005	0.021
28	2.33	0.13	0.026	(0.174)	0.005	0.021
29	2.42	0.13	0.026	(0.173)	0.005	0.021
30	2.50	0.13	0.026	(0.172)	0.005	0.021
31	2.58	0.17	0.032	(0.172)	0.006	0.026
32	2.67	0.17	0.032	(0.171)	0.006	0.026
33	2.75	0.17	0.032	(0.170)	0.006	0.026
34	2.83	0.17	0.032	(0.169)	0.006	0.026
35	2.92	0.17	0.032	(0.169)	0.006	0.026
36	3.00	0.17	0.032	(0.168)	0.006	0.026
37	3.08	0.17	0.032	(0.167)	0.006	0.026
38	3.17	0.17	0.032	(0.167)	0.006	0.026
39	3.25	0.17	0.032	(0.166)	0.006	0.026
40	3.33	0.17	0.032	(0.165)	0.006	0.026
41	3.42	0.17	0.032	(0.165)	0.006	0.026
42	3.50	0.17	0.032	(0.164)	0.006	0.026
43	3.58	0.17	0.032	(0.163)	0.006	0.026
44	3.67	0.17	0.032	(0.162)	0.006	0.026
45	3.75	0.17	0.032	(0.162)	0.006	0.026
46	3.83	0.20	0.038	(0.161)	0.007	0.031
47	3.92	0.20	0.038	(0.160)	0.007	0.031
48	4.00	0.20	0.038	(0.160)	0.007	0.031
49	4.08	0.20	0.038	(0.159)	0.007	0.031
50	4.17	0.20	0.038	(0.158)	0.007	0.031
51	4.25	0.20	0.038	(0.158)	0.007	0.031
52	4.33	0.23	0.045	(0.157)	0.008	0.037
53	4.42	0.23	0.045	(0.156)	0.008	0.037
54	4.50	0.23	0.045	(0.156)	0.008	0.037
55	4.58	0.23	0.045	(0.155)	0.008	0.037
56	4.67	0.23	0.045	(0.154)	0.008	0.037
57	4.75	0.23	0.045	(0.154)	0.008	0.037
58	4.83	0.27	0.051	(0.153)	0.009	0.042
59	4.92	0.27	0.051	(0.152)	0.009	0.042
60	5.00	0.27	0.051	(0.152)	0.009	0.042
61	5.08	0.20	0.038	(0.151)	0.007	0.031
62	5.17	0.20	0.038	(0.150)	0.007	0.031
63	5.25	0.20	0.038	(0.150)	0.007	0.031
64	5.33	0.23	0.045	(0.149)	0.008	0.037
65	5.42	0.23	0.045	(0.148)	0.008	0.037
66	5.50	0.23	0.045	(0.148)	0.008	0.037
67	5.58	0.27	0.051	(0.147)	0.009	0.042
68	5.67	0.27	0.051	(0.147)	0.009	0.042
69	5.75	0.27	0.051	(0.146)	0.009	0.042
70	5.83	0.27	0.051	(0.145)	0.009	0.042
71	5.92	0.27	0.051	(0.145)	0.009	0.042
72	6.00	0.27	0.051	(0.144)	0.009	0.042
73	6.08	0.30	0.058	(0.143)	0.010	0.047
74	6.17	0.30	0.058	(0.143)	0.010	0.047
75	6.25	0.30	0.058	(0.142)	0.010	0.047

76	6.33	0.30	0.058	(0.141)	0.010	0.047
77	6.42	0.30	0.058	(0.141)	0.010	0.047
78	6.50	0.30	0.058	(0.140)	0.010	0.047
79	6.58	0.33	0.064	(0.140)	0.012	0.052
80	6.67	0.33	0.064	(0.139)	0.012	0.052
81	6.75	0.33	0.064	(0.138)	0.012	0.052
82	6.83	0.33	0.064	(0.138)	0.012	0.052
83	6.92	0.33	0.064	(0.137)	0.012	0.052
84	7.00	0.33	0.064	(0.136)	0.012	0.052
85	7.08	0.33	0.064	(0.136)	0.012	0.052
86	7.17	0.33	0.064	(0.135)	0.012	0.052
87	7.25	0.33	0.064	(0.135)	0.012	0.052
88	7.33	0.37	0.070	(0.134)	0.013	0.058
89	7.42	0.37	0.070	(0.133)	0.013	0.058
90	7.50	0.37	0.070	(0.133)	0.013	0.058
91	7.58	0.40	0.077	(0.132)	0.014	0.063
92	7.67	0.40	0.077	(0.131)	0.014	0.063
93	7.75	0.40	0.077	(0.131)	0.014	0.063
94	7.83	0.43	0.083	(0.130)	0.015	0.068
95	7.92	0.43	0.083	(0.130)	0.015	0.068
96	8.00	0.43	0.083	(0.129)	0.015	0.068
97	8.08	0.50	0.096	(0.128)	0.017	0.079
98	8.17	0.50	0.096	(0.128)	0.017	0.079
99	8.25	0.50	0.096	(0.127)	0.017	0.079
100	8.33	0.50	0.096	(0.127)	0.017	0.079
101	8.42	0.50	0.096	(0.126)	0.017	0.079
102	8.50	0.50	0.096	(0.125)	0.017	0.079
103	8.58	0.53	0.102	(0.125)	0.018	0.084
104	8.67	0.53	0.102	(0.124)	0.018	0.084
105	8.75	0.53	0.102	(0.124)	0.018	0.084
106	8.83	0.57	0.109	(0.123)	0.020	0.089
107	8.92	0.57	0.109	(0.123)	0.020	0.089
108	9.00	0.57	0.109	(0.122)	0.020	0.089
109	9.08	0.63	0.122	(0.121)	0.022	0.100
110	9.17	0.63	0.122	(0.121)	0.022	0.100
111	9.25	0.63	0.122	(0.120)	0.022	0.100
112	9.33	0.67	0.128	(0.120)	0.023	0.105
113	9.42	0.67	0.128	(0.119)	0.023	0.105
114	9.50	0.67	0.128	(0.119)	0.023	0.105
115	9.58	0.70	0.134	(0.118)	0.024	0.110
116	9.67	0.70	0.134	(0.117)	0.024	0.110
117	9.75	0.70	0.134	(0.117)	0.024	0.110
118	9.83	0.73	0.141	(0.116)	0.025	0.115
119	9.92	0.73	0.141	(0.116)	0.025	0.115
120	10.00	0.73	0.141	(0.115)	0.025	0.115
121	10.08	0.50	0.096	(0.115)	0.017	0.079
122	10.17	0.50	0.096	(0.114)	0.017	0.079
123	10.25	0.50	0.096	(0.113)	0.017	0.079
124	10.33	0.50	0.096	(0.113)	0.017	0.079
125	10.42	0.50	0.096	(0.112)	0.017	0.079
126	10.50	0.50	0.096	(0.112)	0.017	0.079
127	10.58	0.67	0.128	(0.111)	0.023	0.105
128	10.67	0.67	0.128	(0.111)	0.023	0.105
129	10.75	0.67	0.128	(0.110)	0.023	0.105
130	10.83	0.67	0.128	(0.110)	0.023	0.105
131	10.92	0.67	0.128	(0.109)	0.023	0.105
132	11.00	0.67	0.128	(0.109)	0.023	0.105
133	11.08	0.63	0.122	(0.108)	0.022	0.100
134	11.17	0.63	0.122	(0.108)	0.022	0.100
135	11.25	0.63	0.122	(0.107)	0.022	0.100

136	11.33	0.63	0.122	(0.106)	0.022	0.100
137	11.42	0.63	0.122	(0.106)	0.022	0.100
138	11.50	0.63	0.122	(0.105)	0.022	0.100
139	11.58	0.57	0.109	(0.105)	0.020	0.089
140	11.67	0.57	0.109	(0.104)	0.020	0.089
141	11.75	0.57	0.109	(0.104)	0.020	0.089
142	11.83	0.60	0.115	(0.103)	0.021	0.094
143	11.92	0.60	0.115	(0.103)	0.021	0.094
144	12.00	0.60	0.115	(0.102)	0.021	0.094
145	12.08	0.83	0.160	(0.102)	0.029	0.131
146	12.17	0.83	0.160	(0.101)	0.029	0.131
147	12.25	0.83	0.160	(0.101)	0.029	0.131
148	12.33	0.87	0.166	(0.100)	0.030	0.136
149	12.42	0.87	0.166	(0.100)	0.030	0.136
150	12.50	0.87	0.166	(0.099)	0.030	0.136
151	12.58	0.93	0.179	(0.099)	0.032	0.147
152	12.67	0.93	0.179	(0.098)	0.032	0.147
153	12.75	0.93	0.179	(0.098)	0.032	0.147
154	12.83	0.97	0.186	(0.097)	0.033	0.152
155	12.92	0.97	0.186	(0.097)	0.033	0.152
156	13.00	0.97	0.186	(0.096)	0.033	0.152
157	13.08	1.13	0.218	(0.096)	0.039	0.178
158	13.17	1.13	0.218	(0.095)	0.039	0.178
159	13.25	1.13	0.218	(0.095)	0.039	0.178
160	13.33	1.13	0.218	(0.094)	0.039	0.178
161	13.42	1.13	0.218	(0.094)	0.039	0.178
162	13.50	1.13	0.218	(0.093)	0.039	0.178
163	13.58	0.77	0.147	(0.093)	0.026	0.121
164	13.67	0.77	0.147	(0.092)	0.026	0.121
165	13.75	0.77	0.147	(0.092)	0.026	0.121
166	13.83	0.77	0.147	(0.092)	0.026	0.121
167	13.92	0.77	0.147	(0.091)	0.026	0.121
168	14.00	0.77	0.147	(0.091)	0.026	0.121
169	14.08	0.90	0.173	(0.090)	0.031	0.142
170	14.17	0.90	0.173	(0.090)	0.031	0.142
171	14.25	0.90	0.173	(0.089)	0.031	0.142
172	14.33	0.87	0.166	(0.089)	0.030	0.136
173	14.42	0.87	0.166	(0.088)	0.030	0.136
174	14.50	0.87	0.166	(0.088)	0.030	0.136
175	14.58	0.87	0.166	(0.087)	0.030	0.136
176	14.67	0.87	0.166	(0.087)	0.030	0.136
177	14.75	0.87	0.166	(0.086)	0.030	0.136
178	14.83	0.83	0.160	(0.086)	0.029	0.131
179	14.92	0.83	0.160	(0.086)	0.029	0.131
180	15.00	0.83	0.160	(0.085)	0.029	0.131
181	15.08	0.80	0.154	(0.085)	0.028	0.126
182	15.17	0.80	0.154	(0.084)	0.028	0.126
183	15.25	0.80	0.154	(0.084)	0.028	0.126
184	15.33	0.77	0.147	(0.083)	0.026	0.121
185	15.42	0.77	0.147	(0.083)	0.026	0.121
186	15.50	0.77	0.147	(0.083)	0.026	0.121
187	15.58	0.63	0.122	(0.082)	0.022	0.100
188	15.67	0.63	0.122	(0.082)	0.022	0.100
189	15.75	0.63	0.122	(0.081)	0.022	0.100
190	15.83	0.63	0.122	(0.081)	0.022	0.100
191	15.92	0.63	0.122	(0.080)	0.022	0.100
192	16.00	0.63	0.122	(0.080)	0.022	0.100
193	16.08	0.13	0.026	(0.080)	0.005	0.021
194	16.17	0.13	0.026	(0.079)	0.005	0.021
195	16.25	0.13	0.026	(0.079)	0.005	0.021

196	16.33	0.13	0.026	(0.078)	0.005	0.021
197	16.42	0.13	0.026	(0.078)	0.005	0.021
198	16.50	0.13	0.026	(0.078)	0.005	0.021
199	16.58	0.10	0.019	(0.077)	0.003	0.016
200	16.67	0.10	0.019	(0.077)	0.003	0.016
201	16.75	0.10	0.019	(0.076)	0.003	0.016
202	16.83	0.10	0.019	(0.076)	0.003	0.016
203	16.92	0.10	0.019	(0.076)	0.003	0.016
204	17.00	0.10	0.019	(0.075)	0.003	0.016
205	17.08	0.17	0.032	(0.075)	0.006	0.026
206	17.17	0.17	0.032	(0.075)	0.006	0.026
207	17.25	0.17	0.032	(0.074)	0.006	0.026
208	17.33	0.17	0.032	(0.074)	0.006	0.026
209	17.42	0.17	0.032	(0.073)	0.006	0.026
210	17.50	0.17	0.032	(0.073)	0.006	0.026
211	17.58	0.17	0.032	(0.073)	0.006	0.026
212	17.67	0.17	0.032	(0.072)	0.006	0.026
213	17.75	0.17	0.032	(0.072)	0.006	0.026
214	17.83	0.13	0.026	(0.072)	0.005	0.021
215	17.92	0.13	0.026	(0.071)	0.005	0.021
216	18.00	0.13	0.026	(0.071)	0.005	0.021
217	18.08	0.13	0.026	(0.071)	0.005	0.021
218	18.17	0.13	0.026	(0.070)	0.005	0.021
219	18.25	0.13	0.026	(0.070)	0.005	0.021
220	18.33	0.13	0.026	(0.070)	0.005	0.021
221	18.42	0.13	0.026	(0.069)	0.005	0.021
222	18.50	0.13	0.026	(0.069)	0.005	0.021
223	18.58	0.10	0.019	(0.069)	0.003	0.016
224	18.67	0.10	0.019	(0.068)	0.003	0.016
225	18.75	0.10	0.019	(0.068)	0.003	0.016
226	18.83	0.07	0.013	(0.068)	0.002	0.010
227	18.92	0.07	0.013	(0.067)	0.002	0.010
228	19.00	0.07	0.013	(0.067)	0.002	0.010
229	19.08	0.10	0.019	(0.067)	0.003	0.016
230	19.17	0.10	0.019	(0.066)	0.003	0.016
231	19.25	0.10	0.019	(0.066)	0.003	0.016
232	19.33	0.13	0.026	(0.066)	0.005	0.021
233	19.42	0.13	0.026	(0.065)	0.005	0.021
234	19.50	0.13	0.026	(0.065)	0.005	0.021
235	19.58	0.10	0.019	(0.065)	0.003	0.016
236	19.67	0.10	0.019	(0.064)	0.003	0.016
237	19.75	0.10	0.019	(0.064)	0.003	0.016
238	19.83	0.07	0.013	(0.064)	0.002	0.010
239	19.92	0.07	0.013	(0.064)	0.002	0.010
240	20.00	0.07	0.013	(0.063)	0.002	0.010
241	20.08	0.10	0.019	(0.063)	0.003	0.016
242	20.17	0.10	0.019	(0.063)	0.003	0.016
243	20.25	0.10	0.019	(0.062)	0.003	0.016
244	20.33	0.10	0.019	(0.062)	0.003	0.016
245	20.42	0.10	0.019	(0.062)	0.003	0.016
246	20.50	0.10	0.019	(0.062)	0.003	0.016
247	20.58	0.10	0.019	(0.061)	0.003	0.016
248	20.67	0.10	0.019	(0.061)	0.003	0.016
249	20.75	0.10	0.019	(0.061)	0.003	0.016
250	20.83	0.07	0.013	(0.061)	0.002	0.010
251	20.92	0.07	0.013	(0.060)	0.002	0.010
252	21.00	0.07	0.013	(0.060)	0.002	0.010
253	21.08	0.10	0.019	(0.060)	0.003	0.016
254	21.17	0.10	0.019	(0.060)	0.003	0.016
255	21.25	0.10	0.019	(0.059)	0.003	0.016

256	21.33	0.07	0.013	(0.059)	0.002	0.010
257	21.42	0.07	0.013	(0.059)	0.002	0.010
258	21.50	0.07	0.013	(0.059)	0.002	0.010
259	21.58	0.10	0.019	(0.059)	0.003	0.016
260	21.67	0.10	0.019	(0.058)	0.003	0.016
261	21.75	0.10	0.019	(0.058)	0.003	0.016
262	21.83	0.07	0.013	(0.058)	0.002	0.010
263	21.92	0.07	0.013	(0.058)	0.002	0.010
264	22.00	0.07	0.013	(0.058)	0.002	0.010
265	22.08	0.10	0.019	(0.057)	0.003	0.016
266	22.17	0.10	0.019	(0.057)	0.003	0.016
267	22.25	0.10	0.019	(0.057)	0.003	0.016
268	22.33	0.07	0.013	(0.057)	0.002	0.010
269	22.42	0.07	0.013	(0.057)	0.002	0.010
270	22.50	0.07	0.013	(0.057)	0.002	0.010
271	22.58	0.07	0.013	(0.056)	0.002	0.010
272	22.67	0.07	0.013	(0.056)	0.002	0.010
273	22.75	0.07	0.013	(0.056)	0.002	0.010
274	22.83	0.07	0.013	(0.056)	0.002	0.010
275	22.92	0.07	0.013	(0.056)	0.002	0.010
276	23.00	0.07	0.013	(0.056)	0.002	0.010
277	23.08	0.07	0.013	(0.055)	0.002	0.010
278	23.17	0.07	0.013	(0.055)	0.002	0.010
279	23.25	0.07	0.013	(0.055)	0.002	0.010
280	23.33	0.07	0.013	(0.055)	0.002	0.010
281	23.42	0.07	0.013	(0.055)	0.002	0.010
282	23.50	0.07	0.013	(0.055)	0.002	0.010
283	23.58	0.07	0.013	(0.055)	0.002	0.010
284	23.67	0.07	0.013	(0.055)	0.002	0.010
285	23.75	0.07	0.013	(0.055)	0.002	0.010
286	23.83	0.07	0.013	(0.055)	0.002	0.010
287	23.92	0.07	0.013	(0.055)	0.002	0.010
288	24.00	0.07	0.013	(0.055)	0.002	0.010

(Loss Rate Not Used)

Sum = 100.0 Sum = 15.7

Flood volume = Effective rainfall 1.31(In)
times area 23.7(Ac.)/[(In)/(Ft.)] = 2.6(Ac.Ft)
Total soil loss = 0.29(In)
Total soil loss = 0.569(Ac.Ft)
Total rainfall = 1.60(In)
Flood volume = 112867.4 Cubic Feet
Total soil loss = 24775.8 Cubic Feet

Peak flow rate of this hydrograph = 4.264(CFS)

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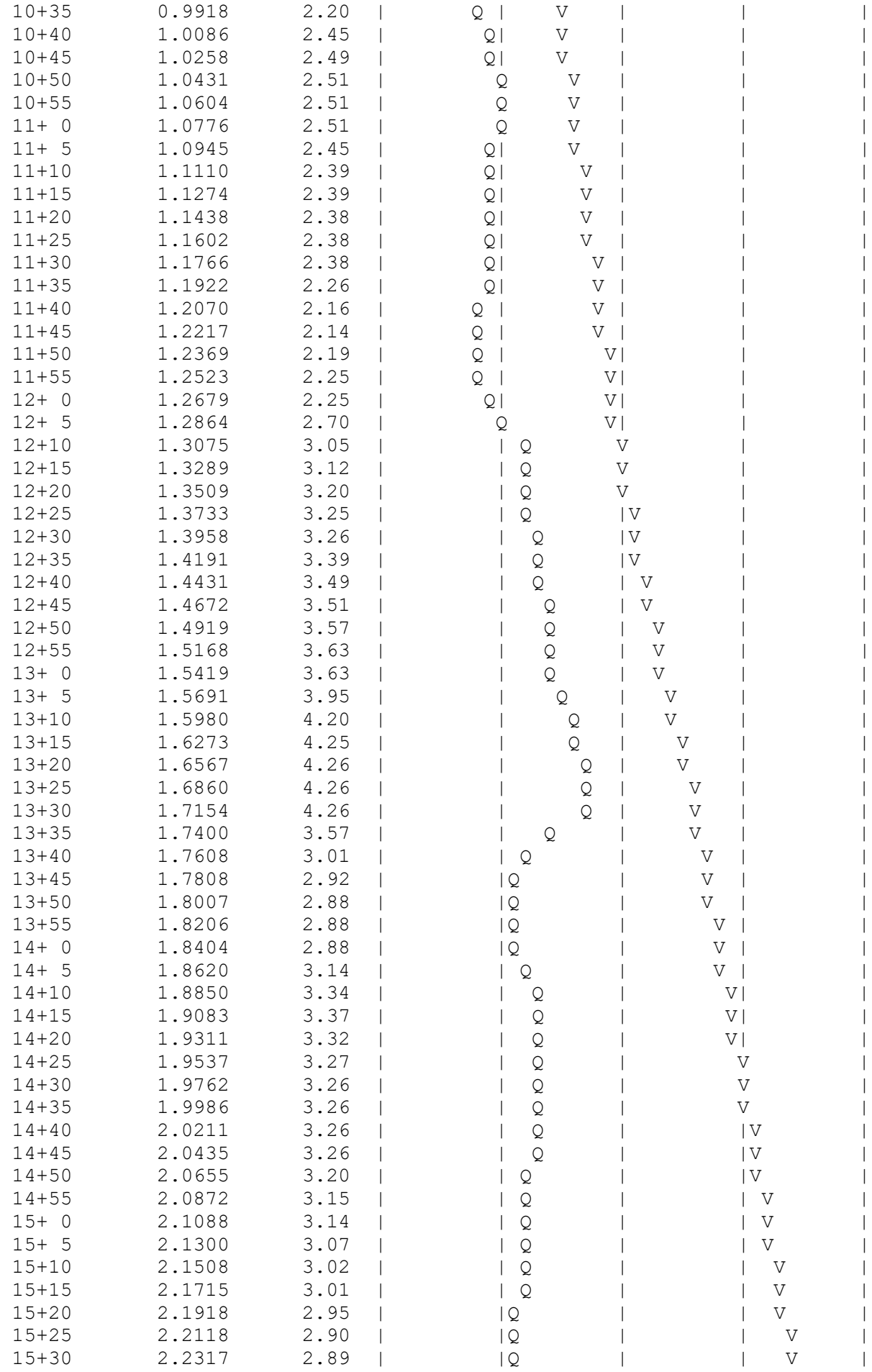
24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	2.5	5.0	7.5	10.0
0+ 5	0.0009	0.13	Q	|	|	|	|
0+10	0.0024	0.23	Q	|	|	|	|
0+15	0.0041	0.25	Q	|	|	|	|
0+20	0.0063	0.31	VQ	|	|	|	|
0+25	0.0088	0.36	VQ	|	|	|	|
0+30	0.0114	0.37	VQ	|	|	|	|

0+35	0.0140	0.38	VQ	|	|	|	|
0+40	0.0165	0.38	VQ	|	|	|	|
0+45	0.0191	0.38	VQ	|	|	|	|
0+50	0.0222	0.44	VQ	|	|	|	|
0+55	0.0255	0.49	VQ	|	|	|	|
1+ 0	0.0290	0.50	VQ	|	|	|	|
1+ 5	0.0320	0.44	VQ	|	|	|	|
1+10	0.0347	0.39	VQ	|	|	|	|
1+15	0.0373	0.38	VQ	|	|	|	|
1+20	0.0399	0.38	VQ	|	|	|	|
1+25	0.0425	0.38	VQ	|	|	|	|
1+30	0.0450	0.38	VQ	|	|	|	|
1+35	0.0476	0.38	VQ	|	|	|	|
1+40	0.0502	0.38	VQ	|	|	|	|
1+45	0.0528	0.38	VQ	|	|	|	|
1+50	0.0558	0.44	VQ	|	|	|	|
1+55	0.0592	0.49	VQ	|	|	|	|
2+ 0	0.0627	0.50	VQ	|	|	|	|
2+ 5	0.0661	0.50	|VQ	|	|	|	|
2+10	0.0696	0.50	|VQ	|	|	|	|
2+15	0.0730	0.50	|VQ	|	|	|	|
2+20	0.0765	0.50	|VQ	|	|	|	|
2+25	0.0799	0.50	|VQ	|	|	|	|
2+30	0.0834	0.50	|VQ	|	|	|	|
2+35	0.0873	0.56	|VQ	|	|	|	|
2+40	0.0915	0.62	|VQ	|	|	|	|
2+45	0.0958	0.62	|VQ	|	|	|	|
2+50	0.1001	0.63	|VQ	|	|	|	|
2+55	0.1044	0.63	|VQ	|	|	|	|
3+ 0	0.1088	0.63	|VQ	|	|	|	|
3+ 5	0.1131	0.63	|VQ	|	|	|	|
3+10	0.1174	0.63	|VQ	|	|	|	|
3+15	0.1217	0.63	|VQ	|	|	|	|
3+20	0.1260	0.63	|VQ	|	|	|	|
3+25	0.1304	0.63	| Q	|	|	|	|
3+30	0.1347	0.63	| Q	|	|	|	|
3+35	0.1390	0.63	| Q	|	|	|	|
3+40	0.1433	0.63	| Q	|	|	|	|
3+45	0.1476	0.63	| Q	|	|	|	|
3+50	0.1524	0.69	| Q	|	|	|	|
3+55	0.1575	0.74	| Q	|	|	|	|
4+ 0	0.1626	0.75	| Q	|	|	|	|
4+ 5	0.1678	0.75	| VQ	|	|	|	|
4+10	0.1730	0.75	| VQ	|	|	|	|
4+15	0.1782	0.75	| VQ	|	|	|	|
4+20	0.1838	0.82	| VQ	|	|	|	|
4+25	0.1898	0.87	| VQ	|	|	|	|
4+30	0.1958	0.88	| Q	|	|	|	|
4+35	0.2018	0.88	| Q	|	|	|	|
4+40	0.2079	0.88	| Q	|	|	|	|
4+45	0.2139	0.88	| Q	|	|	|	|
4+50	0.2204	0.94	| Q	|	|	|	|
4+55	0.2272	0.99	| Q	|	|	|	|
5+ 0	0.2341	1.00	| VQ	|	|	|	|
5+ 5	0.2402	0.88	| Q	|	|	|	|
5+10	0.2455	0.78	| Q	|	|	|	|
5+15	0.2507	0.76	| Q	|	|	|	|
5+20	0.2564	0.82	| Q	|	|	|	|
5+25	0.2623	0.87	| QV	|	|	|	|
5+30	0.2683	0.88	| QV	|	|	|	|

5+35	0.2748	0.94	QV				
5+40	0.2817	0.99	QV				
5+45	0.2885	1.00	Q				
5+50	0.2955	1.00	Q				
5+55	0.3024	1.00	Q				
6+ 0	0.3093	1.00	Q				
6+ 5	0.3166	1.07	Q				
6+10	0.3243	1.12	QV				
6+15	0.3321	1.13	QV				
6+20	0.3398	1.13	QV				
6+25	0.3476	1.13	QV				
6+30	0.3554	1.13	QV				
6+35	0.3636	1.19	QV				
6+40	0.3721	1.24	QV				
6+45	0.3808	1.25	Q				
6+50	0.3894	1.25	QV				
6+55	0.3980	1.25	QV				
7+ 0	0.4067	1.25	QV				
7+ 5	0.4153	1.25	QV				
7+10	0.4240	1.25	QV				
7+15	0.4326	1.25	QV				
7+20	0.4417	1.32	QV				
7+25	0.4511	1.37	QV				
7+30	0.4606	1.38	Q V				
7+35	0.4705	1.44	Q V				
7+40	0.4808	1.49	Q V				
7+45	0.4911	1.50	QV				
7+50	0.5019	1.57	QV				
7+55	0.5131	1.62	QV				
8+ 0	0.5243	1.63	Q V				
8+ 5	0.5364	1.76	QV				
8+10	0.5492	1.86	QV				
8+15	0.5621	1.88	QV				
8+20	0.5750	1.88	QV				
8+25	0.5880	1.88	Q V				
8+30	0.6009	1.88	Q V				
8+35	0.6143	1.94	Q V				
8+40	0.6281	1.99	Q V				
8+45	0.6419	2.00	QV				
8+50	0.6561	2.07	Q V				
8+55	0.6707	2.12	Q V				
9+ 0	0.6854	2.13	Q V				
9+ 5	0.7009	2.26	QV				
9+10	0.7172	2.36	Q|V				
9+15	0.7336	2.38	Q|V				
9+20	0.7504	2.45	Q|V				
9+25	0.7676	2.50	Q|V				
9+30	0.7849	2.51	Q V				
9+35	0.8026	2.57	Q V				
9+40	0.8206	2.62	Q V				
9+45	0.8387	2.63	Q V				
9+50	0.8573	2.70	Q V				
9+55	0.8762	2.75	Q V				
10+ 0	0.8952	2.76	|Q V				
10+ 5	0.9112	2.32	Q| V				
10+10	0.9247	1.96	Q | V				
10+15	0.9378	1.90	Q | V				
10+20	0.9507	1.88	Q | V				
10+25	0.9637	1.88	Q | V				
10+30	0.9767	1.88	Q | V				



15+35	2.2498	2.63	| Q |	|	|	V	|
15+40	2.2665	2.43	| Q|	|	|	V	|
15+45	2.2830	2.39	| Q|	|	|	V	|
15+50	2.2994	2.38	| Q|	|	|	V	|
15+55	2.3158	2.38	| Q|	|	|	V	|
16+ 0	2.3323	2.38	| Q|	|	|	V	|
16+ 5	2.3422	1.44	| Q |	|	|	V	|
16+10	2.3468	0.68	| Q |	|	|	V	|
16+15	2.3506	0.54	| Q |	|	|	V	|
16+20	2.3540	0.50	| Q |	|	|	V	|
16+25	2.3575	0.50	| Q |	|	|	V	|
16+30	2.3609	0.50	| Q |	|	|	V	|
16+35	2.3640	0.44	|Q |	|	|	V	|
16+40	2.3666	0.39	|Q |	|	|	V	|
16+45	2.3692	0.38	|Q |	|	|	V	|
16+50	2.3718	0.38	|Q |	|	|	V	|
16+55	2.3744	0.38	|Q |	|	|	V	|
17+ 0	2.3770	0.38	|Q |	|	|	V	|
17+ 5	2.3805	0.50	| Q |	|	|	V	|
17+10	2.3846	0.60	| Q |	|	|	V	|
17+15	2.3889	0.62	| Q |	|	|	V	|
17+20	2.3932	0.63	| Q |	|	|	V	|
17+25	2.3976	0.63	| Q |	|	|	V	|
17+30	2.4019	0.63	| Q |	|	|	V	|
17+35	2.4062	0.63	| Q |	|	|	V	|
17+40	2.4105	0.63	| Q |	|	|	V	|
17+45	2.4148	0.63	| Q |	|	|	V	|
17+50	2.4187	0.56	| Q |	|	|	V	|
17+55	2.4222	0.51	| Q |	|	|	V	|
18+ 0	2.4257	0.50	| Q |	|	|	V	|
18+ 5	2.4292	0.50	| Q |	|	|	V	|
18+10	2.4326	0.50	| Q |	|	|	V	|
18+15	2.4361	0.50	| Q |	|	|	V	|
18+20	2.4395	0.50	| Q |	|	|	V	|
18+25	2.4430	0.50	| Q |	|	|	V	|
18+30	2.4464	0.50	| Q |	|	|	V	|
18+35	2.4495	0.44	|Q |	|	|	V	|
18+40	2.4521	0.39	|Q |	|	|	V	|
18+45	2.4548	0.38	|Q |	|	|	V	|
18+50	2.4569	0.31	|Q |	|	|	V	|
18+55	2.4587	0.26	|Q |	|	|	V	|
19+ 0	2.4605	0.25	|Q |	|	|	V	|
19+ 5	2.4626	0.31	|Q |	|	|	V	|
19+10	2.4651	0.36	|Q |	|	|	V	|
19+15	2.4677	0.37	|Q |	|	|	V	|
19+20	2.4707	0.44	|Q |	|	|	V	|
19+25	2.4741	0.49	|Q |	|	|	V	|
19+30	2.4775	0.50	|Q |	|	|	V	|
19+35	2.4806	0.44	|Q |	|	|	V	|
19+40	2.4832	0.39	|Q |	|	|	V	|
19+45	2.4858	0.38	|Q |	|	|	V	|
19+50	2.4880	0.31	|Q |	|	|	V	|
19+55	2.4898	0.26	|Q |	|	|	V	|
20+ 0	2.4916	0.25	|Q |	|	|	V	|
20+ 5	2.4937	0.31	|Q |	|	|	V	|
20+10	2.4962	0.36	|Q |	|	|	V	|
20+15	2.4988	0.37	|Q |	|	|	V	|
20+20	2.5014	0.38	|Q |	|	|	V	|
20+25	2.5040	0.38	|Q |	|	|	V	|
20+30	2.5066	0.38	|Q |	|	|	V	|

20+35	2.5092	0.38	|Q	|	|	|	V |
20+40	2.5118	0.38	|Q	|	|	|	V |
20+45	2.5143	0.38	|Q	|	|	|	V |
20+50	2.5165	0.31	|Q	|	|	|	V |
20+55	2.5183	0.26	|Q	|	|	|	V |
21+ 0	2.5201	0.25	|Q	|	|	|	V |
21+ 5	2.5222	0.31	|Q	|	|	|	V |
21+10	2.5247	0.36	|Q	|	|	|	V |
21+15	2.5273	0.37	|Q	|	|	|	V|
21+20	2.5295	0.31	|Q	|	|	|	V|
21+25	2.5313	0.26	|Q	|	|	|	V|
21+30	2.5330	0.25	|Q	|	|	|	V|
21+35	2.5352	0.31	|Q	|	|	|	V|
21+40	2.5377	0.36	|Q	|	|	|	V|
21+45	2.5403	0.37	|Q	|	|	|	V|
21+50	2.5424	0.31	|Q	|	|	|	V|
21+55	2.5442	0.26	|Q	|	|	|	V|
22+ 0	2.5460	0.25	|Q	|	|	|	V|
22+ 5	2.5481	0.31	|Q	|	|	|	V|
22+10	2.5506	0.36	|Q	|	|	|	V|
22+15	2.5532	0.37	|Q	|	|	|	V|
22+20	2.5554	0.31	|Q	|	|	|	V|
22+25	2.5572	0.26	|Q	|	|	|	V|
22+30	2.5589	0.25	|Q	|	|	|	V|
22+35	2.5607	0.25	|Q	|	|	|	V|
22+40	2.5624	0.25	|Q	|	|	|	V|
22+45	2.5641	0.25	|Q	|	|	|	V|
22+50	2.5658	0.25	|Q	|	|	|	V|
22+55	2.5676	0.25	|Q	|	|	|	V|
23+ 0	2.5693	0.25	|Q	|	|	|	V|
23+ 5	2.5710	0.25	|Q	|	|	|	V|
23+10	2.5727	0.25	|Q	|	|	|	V|
23+15	2.5745	0.25	|Q	|	|	|	V|
23+20	2.5762	0.25	|Q	|	|	|	V|
23+25	2.5779	0.25	|Q	|	|	|	V|
23+30	2.5797	0.25	|Q	|	|	|	V|
23+35	2.5814	0.25	|Q	|	|	|	V|
23+40	2.5831	0.25	|Q	|	|	|	V|
23+45	2.5848	0.25	|Q	|	|	|	V|
23+50	2.5866	0.25	|Q	|	|	|	V|
23+55	2.5883	0.25	|Q	|	|	|	V|
24+ 0	2.5900	0.25	|Q	|	|	|	V|
24+ 5	2.5909	0.12	Q	|	|	|	V|
24+10	2.5910	0.02	Q	|	|	|	V|
24+15	2.5911	0.01	Q	|	|	|	V|

U n i t H y d r o g r a p h A n a l y s i s

Study date 03/24/22 File: 20750BPC24100.out

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Riverside County Synthetic Unit Hydrology Method
RCFC & WCD Manual date - April 1978

Program License Serial Number 6310

English (in-lb) Input Units Used
English Rainfall Data (Inches) Input Values Used

English Units used in output format

20-750 Building B
PROPOSED
100 YEAR 24 HOUR

Drainage Area = 23.70(Ac.) = 0.037 Sq. Mi.
Drainage Area for Depth-Area Areal Adjustment = 23.70(Ac.) = 0.037 Sq. Mi.
Length along longest watercourse = 795.00(Ft.)
Length along longest watercourse measured to centroid = 475.00(Ft.)
Length along longest watercourse = 0.151 Mi.
Length along longest watercourse measured to centroid = 0.090 Mi.
Difference in elevation = 6.80(Ft.)
Slope along watercourse = 45.1623 Ft./Mi.
Average Manning's 'N' = 0.015
Lag time = 0.034 Hr.
Lag time = 2.04 Min.
25% of lag time = 0.51 Min.
40% of lag time = 0.82 Min.
Unit time = 5.00 Min.
Duration of storm = 24 Hour(s)
User Entered Base Flow = 0.00(CFS)

2 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.70	1.60	37.92

100 YEAR Area rainfall data:

Area(Ac.)[1]	Rainfall(In)[2]	Weighting[1*2]
23.70	4.00	94.80

STORM EVENT (YEAR) = 100.00
Area Averaged 2-Year Rainfall = 1.600(In)
Area Averaged 100-Year Rainfall = 4.000(In)

Point rain (area averaged) = 4.000(In)
Areal adjustment factor = 100.00 %
Adjusted average point rain = 4.000(In)

Sub-Area Data:

Area(Ac.)	Runoff Index	Impervious %
23.700	69.00	0.900

Total Area Entered = 23.70(Ac.)

RI AMC2	RI AMC-3	Infil. Rate (In/Hr)	Impervious (Dec.%)	Adj. Infil. Rate (In/Hr)	Area% (Dec.)	F (In/Hr)
69.0	84.4	0.194	0.900	0.037	1.000	0.037
					Sum (F) =	0.037

Area averaged mean soil loss (F) (In/Hr) = 0.109
Minimum soil loss rate ((In/Hr)) = 0.055
(for 24 hour storm duration)
Note: User entry of the f value
Soil low loss rate (decimal) = 0.180

U n i t H y d r o g r a p h
VALLEY S-Curve

Unit Hydrograph Data

Unit time period (hrs)		Time % of lag	Distribution Graph %	Unit Hydrograph (CFS)
1	0.083	244.817	50.211	11.993
2	0.167	489.635	40.377	9.644
3	0.250	734.452	7.191	1.718
4	0.333	979.270	2.221	0.530
			Sum = 100.000	Sum= 23.885

The following loss rate calculations reflect use of the minimum calculated loss rate subtracted from the Storm Rain to produce the maximum Effective Rain value

Unit	Time (Hr.)	Pattern Percent	Storm Rain (In/Hr)	Loss rate(In./Hr) Max		Low	Effective (In/Hr)
1	0.08	0.07	0.032	(0.193)		0.006	0.026
2	0.17	0.07	0.032	(0.193)		0.006	0.026
3	0.25	0.07	0.032	(0.192)		0.006	0.026
4	0.33	0.10	0.048	(0.191)		0.009	0.039
5	0.42	0.10	0.048	(0.190)		0.009	0.039
6	0.50	0.10	0.048	(0.190)		0.009	0.039
7	0.58	0.10	0.048	(0.189)		0.009	0.039
8	0.67	0.10	0.048	(0.188)		0.009	0.039
9	0.75	0.10	0.048	(0.187)		0.009	0.039
10	0.83	0.13	0.064	(0.187)		0.012	0.052
11	0.92	0.13	0.064	(0.186)		0.012	0.052
12	1.00	0.13	0.064	(0.185)		0.012	0.052
13	1.08	0.10	0.048	(0.184)		0.009	0.039
14	1.17	0.10	0.048	(0.184)		0.009	0.039

15	1.25	0.10	0.048	(0.183)	0.009	0.039
16	1.33	0.10	0.048	(0.182)	0.009	0.039
17	1.42	0.10	0.048	(0.182)	0.009	0.039
18	1.50	0.10	0.048	(0.181)	0.009	0.039
19	1.58	0.10	0.048	(0.180)	0.009	0.039
20	1.67	0.10	0.048	(0.179)	0.009	0.039
21	1.75	0.10	0.048	(0.179)	0.009	0.039
22	1.83	0.13	0.064	(0.178)	0.012	0.052
23	1.92	0.13	0.064	(0.177)	0.012	0.052
24	2.00	0.13	0.064	(0.176)	0.012	0.052
25	2.08	0.13	0.064	(0.176)	0.012	0.052
26	2.17	0.13	0.064	(0.175)	0.012	0.052
27	2.25	0.13	0.064	(0.174)	0.012	0.052
28	2.33	0.13	0.064	(0.174)	0.012	0.052
29	2.42	0.13	0.064	(0.173)	0.012	0.052
30	2.50	0.13	0.064	(0.172)	0.012	0.052
31	2.58	0.17	0.080	(0.172)	0.014	0.066
32	2.67	0.17	0.080	(0.171)	0.014	0.066
33	2.75	0.17	0.080	(0.170)	0.014	0.066
34	2.83	0.17	0.080	(0.169)	0.014	0.066
35	2.92	0.17	0.080	(0.169)	0.014	0.066
36	3.00	0.17	0.080	(0.168)	0.014	0.066
37	3.08	0.17	0.080	(0.167)	0.014	0.066
38	3.17	0.17	0.080	(0.167)	0.014	0.066
39	3.25	0.17	0.080	(0.166)	0.014	0.066
40	3.33	0.17	0.080	(0.165)	0.014	0.066
41	3.42	0.17	0.080	(0.165)	0.014	0.066
42	3.50	0.17	0.080	(0.164)	0.014	0.066
43	3.58	0.17	0.080	(0.163)	0.014	0.066
44	3.67	0.17	0.080	(0.162)	0.014	0.066
45	3.75	0.17	0.080	(0.162)	0.014	0.066
46	3.83	0.20	0.096	(0.161)	0.017	0.079
47	3.92	0.20	0.096	(0.160)	0.017	0.079
48	4.00	0.20	0.096	(0.160)	0.017	0.079
49	4.08	0.20	0.096	(0.159)	0.017	0.079
50	4.17	0.20	0.096	(0.158)	0.017	0.079
51	4.25	0.20	0.096	(0.158)	0.017	0.079
52	4.33	0.23	0.112	(0.157)	0.020	0.092
53	4.42	0.23	0.112	(0.156)	0.020	0.092
54	4.50	0.23	0.112	(0.156)	0.020	0.092
55	4.58	0.23	0.112	(0.155)	0.020	0.092
56	4.67	0.23	0.112	(0.154)	0.020	0.092
57	4.75	0.23	0.112	(0.154)	0.020	0.092
58	4.83	0.27	0.128	(0.153)	0.023	0.105
59	4.92	0.27	0.128	(0.152)	0.023	0.105
60	5.00	0.27	0.128	(0.152)	0.023	0.105
61	5.08	0.20	0.096	(0.151)	0.017	0.079
62	5.17	0.20	0.096	(0.150)	0.017	0.079
63	5.25	0.20	0.096	(0.150)	0.017	0.079
64	5.33	0.23	0.112	(0.149)	0.020	0.092
65	5.42	0.23	0.112	(0.148)	0.020	0.092
66	5.50	0.23	0.112	(0.148)	0.020	0.092
67	5.58	0.27	0.128	(0.147)	0.023	0.105
68	5.67	0.27	0.128	(0.147)	0.023	0.105
69	5.75	0.27	0.128	(0.146)	0.023	0.105
70	5.83	0.27	0.128	(0.145)	0.023	0.105
71	5.92	0.27	0.128	(0.145)	0.023	0.105
72	6.00	0.27	0.128	(0.144)	0.023	0.105
73	6.08	0.30	0.144	(0.143)	0.026	0.118
74	6.17	0.30	0.144	(0.143)	0.026	0.118

75	6.25	0.30	0.144	(0.142)	0.026	0.118
76	6.33	0.30	0.144	(0.141)	0.026	0.118
77	6.42	0.30	0.144	(0.141)	0.026	0.118
78	6.50	0.30	0.144	(0.140)	0.026	0.118
79	6.58	0.33	0.160	(0.140)	0.029	0.131
80	6.67	0.33	0.160	(0.139)	0.029	0.131
81	6.75	0.33	0.160	(0.138)	0.029	0.131
82	6.83	0.33	0.160	(0.138)	0.029	0.131
83	6.92	0.33	0.160	(0.137)	0.029	0.131
84	7.00	0.33	0.160	(0.136)	0.029	0.131
85	7.08	0.33	0.160	(0.136)	0.029	0.131
86	7.17	0.33	0.160	(0.135)	0.029	0.131
87	7.25	0.33	0.160	(0.135)	0.029	0.131
88	7.33	0.37	0.176	(0.134)	0.032	0.144
89	7.42	0.37	0.176	(0.133)	0.032	0.144
90	7.50	0.37	0.176	(0.133)	0.032	0.144
91	7.58	0.40	0.192	(0.132)	0.035	0.157
92	7.67	0.40	0.192	(0.131)	0.035	0.157
93	7.75	0.40	0.192	(0.131)	0.035	0.157
94	7.83	0.43	0.208	(0.130)	0.037	0.171
95	7.92	0.43	0.208	(0.130)	0.037	0.171
96	8.00	0.43	0.208	(0.129)	0.037	0.171
97	8.08	0.50	0.240	(0.128)	0.043	0.197
98	8.17	0.50	0.240	(0.128)	0.043	0.197
99	8.25	0.50	0.240	(0.127)	0.043	0.197
100	8.33	0.50	0.240	(0.127)	0.043	0.197
101	8.42	0.50	0.240	(0.126)	0.043	0.197
102	8.50	0.50	0.240	(0.125)	0.043	0.197
103	8.58	0.53	0.256	(0.125)	0.046	0.210
104	8.67	0.53	0.256	(0.124)	0.046	0.210
105	8.75	0.53	0.256	(0.124)	0.046	0.210
106	8.83	0.57	0.272	(0.123)	0.049	0.223
107	8.92	0.57	0.272	(0.123)	0.049	0.223
108	9.00	0.57	0.272	(0.122)	0.049	0.223
109	9.08	0.63	0.304	(0.121)	0.055	0.249
110	9.17	0.63	0.304	(0.121)	0.055	0.249
111	9.25	0.63	0.304	(0.120)	0.055	0.249
112	9.33	0.67	0.320	(0.120)	0.058	0.262
113	9.42	0.67	0.320	(0.119)	0.058	0.262
114	9.50	0.67	0.320	(0.119)	0.058	0.262
115	9.58	0.70	0.336	(0.118)	0.060	0.276
116	9.67	0.70	0.336	(0.117)	0.060	0.276
117	9.75	0.70	0.336	(0.117)	0.060	0.276
118	9.83	0.73	0.352	(0.116)	0.063	0.289
119	9.92	0.73	0.352	(0.116)	0.063	0.289
120	10.00	0.73	0.352	(0.115)	0.063	0.289
121	10.08	0.50	0.240	(0.115)	0.043	0.197
122	10.17	0.50	0.240	(0.114)	0.043	0.197
123	10.25	0.50	0.240	(0.113)	0.043	0.197
124	10.33	0.50	0.240	(0.113)	0.043	0.197
125	10.42	0.50	0.240	(0.112)	0.043	0.197
126	10.50	0.50	0.240	(0.112)	0.043	0.197
127	10.58	0.67	0.320	(0.111)	0.058	0.262
128	10.67	0.67	0.320	(0.111)	0.058	0.262
129	10.75	0.67	0.320	(0.110)	0.058	0.262
130	10.83	0.67	0.320	(0.110)	0.058	0.262
131	10.92	0.67	0.320	(0.109)	0.058	0.262
132	11.00	0.67	0.320	(0.109)	0.058	0.262
133	11.08	0.63	0.304	(0.108)	0.055	0.249
134	11.17	0.63	0.304	(0.108)	0.055	0.249

135	11.25	0.63	0.304	(0.107)	0.055	0.249
136	11.33	0.63	0.304	(0.106)	0.055	0.249
137	11.42	0.63	0.304	(0.106)	0.055	0.249
138	11.50	0.63	0.304	(0.105)	0.055	0.249
139	11.58	0.57	0.272	(0.105)	0.049	0.223
140	11.67	0.57	0.272	(0.104)	0.049	0.223
141	11.75	0.57	0.272	(0.104)	0.049	0.223
142	11.83	0.60	0.288	(0.103)	0.052	0.236
143	11.92	0.60	0.288	(0.103)	0.052	0.236
144	12.00	0.60	0.288	(0.102)	0.052	0.236
145	12.08	0.83	0.400	(0.102)	0.072	0.328
146	12.17	0.83	0.400	(0.101)	0.072	0.328
147	12.25	0.83	0.400	(0.101)	0.072	0.328
148	12.33	0.87	0.416	(0.100)	0.075	0.341
149	12.42	0.87	0.416	(0.100)	0.075	0.341
150	12.50	0.87	0.416	(0.099)	0.075	0.341
151	12.58	0.93	0.448	(0.099)	0.081	0.367
152	12.67	0.93	0.448	(0.098)	0.081	0.367
153	12.75	0.93	0.448	(0.098)	0.081	0.367
154	12.83	0.97	0.464	(0.097)	0.084	0.380
155	12.92	0.97	0.464	(0.097)	0.084	0.380
156	13.00	0.97	0.464	(0.096)	0.084	0.380
157	13.08	1.13	0.544	0.096	(0.098)	0.448
158	13.17	1.13	0.544	0.095	(0.098)	0.449
159	13.25	1.13	0.544	0.095	(0.098)	0.449
160	13.33	1.13	0.544	0.094	(0.098)	0.450
161	13.42	1.13	0.544	0.094	(0.098)	0.450
162	13.50	1.13	0.544	0.093	(0.098)	0.451
163	13.58	0.77	0.368	(0.093)	0.066	0.302
164	13.67	0.77	0.368	(0.092)	0.066	0.302
165	13.75	0.77	0.368	(0.092)	0.066	0.302
166	13.83	0.77	0.368	(0.092)	0.066	0.302
167	13.92	0.77	0.368	(0.091)	0.066	0.302
168	14.00	0.77	0.368	(0.091)	0.066	0.302
169	14.08	0.90	0.432	(0.090)	0.078	0.354
170	14.17	0.90	0.432	(0.090)	0.078	0.354
171	14.25	0.90	0.432	(0.089)	0.078	0.354
172	14.33	0.87	0.416	(0.089)	0.075	0.341
173	14.42	0.87	0.416	(0.088)	0.075	0.341
174	14.50	0.87	0.416	(0.088)	0.075	0.341
175	14.58	0.87	0.416	(0.087)	0.075	0.341
176	14.67	0.87	0.416	(0.087)	0.075	0.341
177	14.75	0.87	0.416	(0.086)	0.075	0.341
178	14.83	0.83	0.400	(0.086)	0.072	0.328
179	14.92	0.83	0.400	(0.086)	0.072	0.328
180	15.00	0.83	0.400	(0.085)	0.072	0.328
181	15.08	0.80	0.384	(0.085)	0.069	0.315
182	15.17	0.80	0.384	(0.084)	0.069	0.315
183	15.25	0.80	0.384	(0.084)	0.069	0.315
184	15.33	0.77	0.368	(0.083)	0.066	0.302
185	15.42	0.77	0.368	(0.083)	0.066	0.302
186	15.50	0.77	0.368	(0.083)	0.066	0.302
187	15.58	0.63	0.304	(0.082)	0.055	0.249
188	15.67	0.63	0.304	(0.082)	0.055	0.249
189	15.75	0.63	0.304	(0.081)	0.055	0.249
190	15.83	0.63	0.304	(0.081)	0.055	0.249
191	15.92	0.63	0.304	(0.080)	0.055	0.249
192	16.00	0.63	0.304	(0.080)	0.055	0.249
193	16.08	0.13	0.064	(0.080)	0.012	0.052
194	16.17	0.13	0.064	(0.079)	0.012	0.052

195	16.25	0.13	0.064	(0.079)	0.012	0.052
196	16.33	0.13	0.064	(0.078)	0.012	0.052
197	16.42	0.13	0.064	(0.078)	0.012	0.052
198	16.50	0.13	0.064	(0.078)	0.012	0.052
199	16.58	0.10	0.048	(0.077)	0.009	0.039
200	16.67	0.10	0.048	(0.077)	0.009	0.039
201	16.75	0.10	0.048	(0.076)	0.009	0.039
202	16.83	0.10	0.048	(0.076)	0.009	0.039
203	16.92	0.10	0.048	(0.076)	0.009	0.039
204	17.00	0.10	0.048	(0.075)	0.009	0.039
205	17.08	0.17	0.080	(0.075)	0.014	0.066
206	17.17	0.17	0.080	(0.075)	0.014	0.066
207	17.25	0.17	0.080	(0.074)	0.014	0.066
208	17.33	0.17	0.080	(0.074)	0.014	0.066
209	17.42	0.17	0.080	(0.073)	0.014	0.066
210	17.50	0.17	0.080	(0.073)	0.014	0.066
211	17.58	0.17	0.080	(0.073)	0.014	0.066
212	17.67	0.17	0.080	(0.072)	0.014	0.066
213	17.75	0.17	0.080	(0.072)	0.014	0.066
214	17.83	0.13	0.064	(0.072)	0.012	0.052
215	17.92	0.13	0.064	(0.071)	0.012	0.052
216	18.00	0.13	0.064	(0.071)	0.012	0.052
217	18.08	0.13	0.064	(0.071)	0.012	0.052
218	18.17	0.13	0.064	(0.070)	0.012	0.052
219	18.25	0.13	0.064	(0.070)	0.012	0.052
220	18.33	0.13	0.064	(0.070)	0.012	0.052
221	18.42	0.13	0.064	(0.069)	0.012	0.052
222	18.50	0.13	0.064	(0.069)	0.012	0.052
223	18.58	0.10	0.048	(0.069)	0.009	0.039
224	18.67	0.10	0.048	(0.068)	0.009	0.039
225	18.75	0.10	0.048	(0.068)	0.009	0.039
226	18.83	0.07	0.032	(0.068)	0.006	0.026
227	18.92	0.07	0.032	(0.067)	0.006	0.026
228	19.00	0.07	0.032	(0.067)	0.006	0.026
229	19.08	0.10	0.048	(0.067)	0.009	0.039
230	19.17	0.10	0.048	(0.066)	0.009	0.039
231	19.25	0.10	0.048	(0.066)	0.009	0.039
232	19.33	0.13	0.064	(0.066)	0.012	0.052
233	19.42	0.13	0.064	(0.065)	0.012	0.052
234	19.50	0.13	0.064	(0.065)	0.012	0.052
235	19.58	0.10	0.048	(0.065)	0.009	0.039
236	19.67	0.10	0.048	(0.064)	0.009	0.039
237	19.75	0.10	0.048	(0.064)	0.009	0.039
238	19.83	0.07	0.032	(0.064)	0.006	0.026
239	19.92	0.07	0.032	(0.064)	0.006	0.026
240	20.00	0.07	0.032	(0.063)	0.006	0.026
241	20.08	0.10	0.048	(0.063)	0.009	0.039
242	20.17	0.10	0.048	(0.063)	0.009	0.039
243	20.25	0.10	0.048	(0.062)	0.009	0.039
244	20.33	0.10	0.048	(0.062)	0.009	0.039
245	20.42	0.10	0.048	(0.062)	0.009	0.039
246	20.50	0.10	0.048	(0.062)	0.009	0.039
247	20.58	0.10	0.048	(0.061)	0.009	0.039
248	20.67	0.10	0.048	(0.061)	0.009	0.039
249	20.75	0.10	0.048	(0.061)	0.009	0.039
250	20.83	0.07	0.032	(0.061)	0.006	0.026
251	20.92	0.07	0.032	(0.060)	0.006	0.026
252	21.00	0.07	0.032	(0.060)	0.006	0.026
253	21.08	0.10	0.048	(0.060)	0.009	0.039
254	21.17	0.10	0.048	(0.060)	0.009	0.039

255	21.25	0.10	0.048	(0.059)	0.009	0.039
256	21.33	0.07	0.032	(0.059)	0.006	0.026
257	21.42	0.07	0.032	(0.059)	0.006	0.026
258	21.50	0.07	0.032	(0.059)	0.006	0.026
259	21.58	0.10	0.048	(0.059)	0.009	0.039
260	21.67	0.10	0.048	(0.058)	0.009	0.039
261	21.75	0.10	0.048	(0.058)	0.009	0.039
262	21.83	0.07	0.032	(0.058)	0.006	0.026
263	21.92	0.07	0.032	(0.058)	0.006	0.026
264	22.00	0.07	0.032	(0.058)	0.006	0.026
265	22.08	0.10	0.048	(0.057)	0.009	0.039
266	22.17	0.10	0.048	(0.057)	0.009	0.039
267	22.25	0.10	0.048	(0.057)	0.009	0.039
268	22.33	0.07	0.032	(0.057)	0.006	0.026
269	22.42	0.07	0.032	(0.057)	0.006	0.026
270	22.50	0.07	0.032	(0.057)	0.006	0.026
271	22.58	0.07	0.032	(0.056)	0.006	0.026
272	22.67	0.07	0.032	(0.056)	0.006	0.026
273	22.75	0.07	0.032	(0.056)	0.006	0.026
274	22.83	0.07	0.032	(0.056)	0.006	0.026
275	22.92	0.07	0.032	(0.056)	0.006	0.026
276	23.00	0.07	0.032	(0.056)	0.006	0.026
277	23.08	0.07	0.032	(0.055)	0.006	0.026
278	23.17	0.07	0.032	(0.055)	0.006	0.026
279	23.25	0.07	0.032	(0.055)	0.006	0.026
280	23.33	0.07	0.032	(0.055)	0.006	0.026
281	23.42	0.07	0.032	(0.055)	0.006	0.026
282	23.50	0.07	0.032	(0.055)	0.006	0.026
283	23.58	0.07	0.032	(0.055)	0.006	0.026
284	23.67	0.07	0.032	(0.055)	0.006	0.026
285	23.75	0.07	0.032	(0.055)	0.006	0.026
286	23.83	0.07	0.032	(0.055)	0.006	0.026
287	23.92	0.07	0.032	(0.055)	0.006	0.026
288	24.00	0.07	0.032	(0.055)	0.006	0.026

(Loss Rate Not Used)

Sum = 100.0 Sum = 39.4

Flood volume = Effective rainfall 3.28(In)
times area 23.7(Ac.)/[(In)/(Ft.)] = 6.5(Ac.Ft)
Total soil loss = 0.72(In)
Total soil loss = 1.419(Ac.Ft)
Total rainfall = 4.00(In)
Flood volume = 282311.0 Cubic Feet
Total soil loss = 61797.1 Cubic Feet

Peak flow rate of this hydrograph = 10.760(CFS)

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24 - H O U R S T O R M
R u n o f f H y d r o g r a p h

Hydrograph in 5 Minute intervals ((CFS))

Time(h+m)	Volume Ac.Ft	Q(CFS)	0	5.0	10.0	15.0	20.0
0+ 5	0.0022	0.31	Q	|	|	|	|
0+10	0.0061	0.57	VQ	|	|	|	|
0+15	0.0103	0.61	VQ	|	|	|	|
0+20	0.0157	0.78	VQ	|	|	|	|
0+25	0.0220	0.91	VQ	|	|	|	|

0+30	0.0284	0.93	VQ	|	|	|	|
0+35	0.0349	0.94	VQ	|	|	|	|
0+40	0.0414	0.94	VQ	|	|	|	|
0+45	0.0478	0.94	VQ	|	|	|	|
0+50	0.0554	1.10	V Q	|	|	|	|
0+55	0.0638	1.22	V Q	|	|	|	|
1+ 0	0.0724	1.25	V Q	|	|	|	|
1+ 5	0.0800	1.10	V Q	|	|	|	|
1+10	0.0867	0.97	VQ	|	|	|	|
1+15	0.0932	0.95	VQ	|	|	|	|
1+20	0.0997	0.94	VQ	|	|	|	|
1+25	0.1061	0.94	VQ	|	|	|	|
1+30	0.1126	0.94	VQ	|	|	|	|
1+35	0.1191	0.94	VQ	|	|	|	|
1+40	0.1256	0.94	VQ	|	|	|	|
1+45	0.1321	0.94	VQ	|	|	|	|
1+50	0.1396	1.10	V Q	|	|	|	|
1+55	0.1480	1.22	V Q	|	|	|	|
2+ 0	0.1566	1.25	V Q	|	|	|	|
2+ 5	0.1653	1.25	|VQ	|	|	|	|
2+10	0.1739	1.25	|VQ	|	|	|	|
2+15	0.1825	1.25	|VQ	|	|	|	|
2+20	0.1912	1.25	|VQ	|	|	|	|
2+25	0.1998	1.25	|VQ	|	|	|	|
2+30	0.2085	1.25	|VQ	|	|	|	|
2+35	0.2182	1.41	|VQ	|	|	|	|
2+40	0.2288	1.54	|V Q	|	|	|	|
2+45	0.2395	1.56	|V Q	|	|	|	|
2+50	0.2503	1.57	|V Q	|	|	|	|
2+55	0.2611	1.57	|V Q	|	|	|	|
3+ 0	0.2719	1.57	|V Q	|	|	|	|
3+ 5	0.2827	1.57	|V Q	|	|	|	|
3+10	0.2935	1.57	|V Q	|	|	|	|
3+15	0.3043	1.57	|V Q	|	|	|	|
3+20	0.3151	1.57	|V Q	|	|	|	|
3+25	0.3259	1.57	| VQ	|	|	|	|
3+30	0.3367	1.57	| VQ	|	|	|	|
3+35	0.3475	1.57	| VQ	|	|	|	|
3+40	0.3583	1.57	| VQ	|	|	|	|
3+45	0.3691	1.57	| VQ	|	|	|	|
3+50	0.3810	1.73	| VQ	|	|	|	|
3+55	0.3937	1.85	| VQ	|	|	|	|
4+ 0	0.4066	1.87	| VQ	|	|	|	|
4+ 5	0.4196	1.88	| VQ	|	|	|	|
4+10	0.4325	1.88	| VQ	|	|	|	|
4+15	0.4455	1.88	| VQ	|	|	|	|
4+20	0.4595	2.04	| V Q	|	|	|	|
4+25	0.4744	2.17	| V Q	|	|	|	|
4+30	0.4895	2.19	| VQ	|	|	|	|
4+35	0.5046	2.19	| VQ	|	|	|	|
4+40	0.5197	2.19	| VQ	|	|	|	|
4+45	0.5348	2.19	| VQ	|	|	|	|
4+50	0.5510	2.35	| VQ	|	|	|	|
4+55	0.5681	2.48	| VQ	|	|	|	|
5+ 0	0.5853	2.50	| V Q	|	|	|	|
5+ 5	0.6004	2.19	| VQ	|	|	|	|
5+10	0.6138	1.94	| Q	|	|	|	|
5+15	0.6269	1.90	| Q	|	|	|	|
5+20	0.6409	2.04	| VQ	|	|	|	|
5+25	0.6558	2.17	| Q	|	|	|	|

5+30	0.6709	2.19	Q				
5+35	0.6871	2.35	Q				
5+40	0.7041	2.48	Q				
5+45	0.7214	2.50	VQ				
5+50	0.7386	2.51	VQ				
5+55	0.7559	2.51	VQ				
6+ 0	0.7732	2.51	VQ				
6+ 5	0.7915	2.67	VQ				
6+10	0.8108	2.79	Q				
6+15	0.8302	2.81	Q				
6+20	0.8496	2.82	Q				
6+25	0.8690	2.82	Q				
6+30	0.8885	2.82	Q				
6+35	0.9090	2.98	Q				
6+40	0.9304	3.11	VQ				
6+45	0.9519	3.13	VQ				
6+50	0.9735	3.14	Q				
6+55	0.9951	3.14	Q				
7+ 0	1.0167	3.14	Q				
7+ 5	1.0383	3.14	Q				
7+10	1.0599	3.14	Q				
7+15	1.0815	3.14	Q				
7+20	1.1041	3.29	Q				
7+25	1.1277	3.42	Q				
7+30	1.1514	3.44	QV				
7+35	1.1762	3.61	Q				
7+40	1.2019	3.73	Q				
7+45	1.2278	3.76	Q				
7+50	1.2548	3.92	Q				
7+55	1.2827	4.05	VQ				
8+ 0	1.3107	4.07	Q				
8+ 5	1.3409	4.39	Q				
8+10	1.3729	4.64	VQ				
8+15	1.4052	4.69	VQ				
8+20	1.4376	4.70	VQ				
8+25	1.4700	4.70	Q				
8+30	1.5024	4.70	Q				
8+35	1.5358	4.86	Q				
8+40	1.5702	4.99	Q				
8+45	1.6047	5.01	VQ				
8+50	1.6403	5.17	Q				
8+55	1.6768	5.30	Q				
9+ 0	1.7135	5.32	Q				
9+ 5	1.7524	5.64	VQ				
9+10	1.7930	5.90	Q				
9+15	1.8339	5.94	Q				
9+20	1.8760	6.11	VQ				
9+25	1.9190	6.24	VQ				
9+30	1.9621	6.26	Q				
9+35	2.0064	6.43	Q				
9+40	2.0515	6.55	VQ				
9+45	2.0968	6.58	VQ				
9+50	2.1433	6.74	Q				
9+55	2.1906	6.87	Q				
10+ 0	2.2380	6.89	Q				
10+ 5	2.2779	5.80	Q V				
10+10	2.3117	4.91	Q V				
10+15	2.3445	4.75	Q V				
10+20	2.3769	4.70	Q V				
10+25	2.4092	4.70	Q V				

10+30	2.4416	4.70	|	Q|	V	|	|
10+35	2.4794	5.49	|	Q	V	|	|
10+40	2.5216	6.12	|	| Q	V	|	|
10+45	2.5646	6.24	|	| Q	V	|	|
10+50	2.6077	6.27	|	| Q	V	|	|
10+55	2.6509	6.27	|	| Q	V	|	|
11+ 0	2.6941	6.27	|	| Q	V	|	|
11+ 5	2.7362	6.11	|	| Q	V	|	|
11+10	2.7774	5.99	|	|Q	V	|	|
11+15	2.8185	5.96	|	|Q	V	|	|
11+20	2.8595	5.96	|	|Q	V	|	|
11+25	2.9006	5.96	|	|Q	V	|	|
11+30	2.9416	5.96	|	|Q	V	|	|
11+35	2.9804	5.64	|	|Q	V	|	|
11+40	3.0176	5.39	|	Q	V	|	|
11+45	3.0544	5.34	|	Q	V	|	|
11+50	3.0922	5.49	|	Q	V|	|	|
11+55	3.1308	5.61	|	|Q	V|	|	|
12+ 0	3.1696	5.64	|	|Q	V|	|	|
12+ 5	3.2161	6.75	|	| Q	V|	|	|
12+10	3.2686	7.63	|	| Q	V	|	|
12+15	3.3223	7.79	|	| Q	V	|	|
12+20	3.3774	8.00	|	| Q	V	|	|
12+25	3.4333	8.12	|	| Q	|V	|	|
12+30	3.4894	8.14	|	| Q	|V	|	|
12+35	3.5477	8.47	|	| Q	|V	|	|
12+40	3.6077	8.72	|	| Q	| V	|	|
12+45	3.6681	8.76	|	| Q	| V	|	|
12+50	3.7297	8.94	|	| Q	| V	|	|
12+55	3.7921	9.06	|	| Q |	V	|	|
13+ 0	3.8546	9.09	|	| Q |	V	|	|
13+ 5	3.9228	9.90	|	| Q|	V	|	|
13+10	3.9956	10.56	|	| |Q	V	|	|
13+15	4.0692	10.69	|	| |Q	V	|	|
13+20	4.1432	10.74	|	| |Q	V	|	|
13+25	4.2172	10.75	|	| |Q	V	|	|
13+30	4.2913	10.76	|	| |Q	V	|	|
13+35	4.3532	8.98	|	| Q	|	V	|	|
13+40	4.4051	7.55	|	| Q	|	V	|	|
13+45	4.4553	7.29	|	| Q	|	V	|	|
13+50	4.5050	7.21	|	| Q	|	V	|	|
13+55	4.5547	7.21	|	| Q	|	V	|	|
14+ 0	4.6043	7.21	|	| Q	|	V	|	|
14+ 5	4.6583	7.84	|	| Q	|	V	|	|
14+10	4.7158	8.35	|	| Q	|	V|	|
14+15	4.7739	8.44	|	| Q	|	V|	|
14+20	4.8311	8.31	|	| Q	|	V|	|
14+25	4.8875	8.18	|	| Q	|	V	|
14+30	4.9437	8.16	|	| Q	|	V	|
14+35	4.9998	8.15	|	| Q	|	V	|
14+40	5.0559	8.15	|	| Q	|	|V	|
14+45	5.1121	8.15	|	| Q	|	|V	|
14+50	5.1671	7.99	|	| Q	|	|V	|
14+55	5.2213	7.87	|	| Q	|	| V	|
15+ 0	5.2753	7.84	|	| Q	|	| V	|
15+ 5	5.3282	7.68	|	| Q	|	| V	|
15+10	5.3803	7.55	|	| Q	|	| V	|
15+15	5.4321	7.53	|	| Q	|	| V	|
15+20	5.4829	7.37	|	| Q	|	| V	|
15+25	5.5327	7.24	|	| Q	|	| V	|

15+30	5.5825	7.22	|	Q	|	V	|
15+35	5.6278	6.58	|	Q	|	V	|
15+40	5.6696	6.07	|	Q	|	V	|
15+45	5.7108	5.98	|	Q	|	V	|
15+50	5.7519	5.96	|	Q	|	V	|
15+55	5.7929	5.96	|	Q	|	V	|
16+ 0	5.8339	5.96	|	Q	|	V	|
16+ 5	5.8587	3.60	|	Q	|	V	|
16+10	5.8704	1.70	| Q	|	|	V	|
16+15	5.8797	1.36	| Q	|	|	V	|
16+20	5.8884	1.25	| Q	|	|	V	|
16+25	5.8970	1.25	| Q	|	|	V	|
16+30	5.9056	1.25	| Q	|	|	V	|
16+35	5.9132	1.10	| Q	|	|	V	|
16+40	5.9199	0.97	|Q	|	|	V	|
16+45	5.9264	0.95	|Q	|	|	V	|
16+50	5.9329	0.94	|Q	|	|	V	|
16+55	5.9393	0.94	|Q	|	|	V	|
17+ 0	5.9458	0.94	|Q	|	|	V	|
17+ 5	5.9545	1.26	| Q	|	|	V	|
17+10	5.9649	1.51	| Q	|	|	V	|
17+15	5.9756	1.55	| Q	|	|	V	|
17+20	5.9864	1.57	| Q	|	|	V	|
17+25	5.9971	1.57	| Q	|	|	V	|
17+30	6.0079	1.57	| Q	|	|	V	|
17+35	6.0187	1.57	| Q	|	|	V	|
17+40	6.0295	1.57	| Q	|	|	V	|
17+45	6.0403	1.57	| Q	|	|	V	|
17+50	6.0500	1.41	| Q	|	|	V	|
17+55	6.0589	1.28	| Q	|	|	V	|
18+ 0	6.0676	1.26	| Q	|	|	V	|
18+ 5	6.0762	1.25	| Q	|	|	V	|
18+10	6.0848	1.25	| Q	|	|	V	|
18+15	6.0935	1.25	| Q	|	|	V	|
18+20	6.1021	1.25	| Q	|	|	V	|
18+25	6.1108	1.25	| Q	|	|	V	|
18+30	6.1194	1.25	| Q	|	|	V	|
18+35	6.1269	1.10	| Q	|	|	V	|
18+40	6.1336	0.97	|Q	|	|	V	|
18+45	6.1401	0.95	|Q	|	|	V	|
18+50	6.1455	0.78	|Q	|	|	V	|
18+55	6.1501	0.66	|Q	|	|	V	|
19+ 0	6.1544	0.63	|Q	|	|	V	|
19+ 5	6.1598	0.78	|Q	|	|	V	|
19+10	6.1661	0.91	|Q	|	|	V	|
19+15	6.1725	0.93	|Q	|	|	V	|
19+20	6.1801	1.10	| Q	|	|	V	|
19+25	6.1885	1.22	| Q	|	|	V	|
19+30	6.1971	1.25	| Q	|	|	V	|
19+35	6.2047	1.10	| Q	|	|	V	|
19+40	6.2114	0.97	|Q	|	|	V	|
19+45	6.2179	0.95	|Q	|	|	V	|
19+50	6.2233	0.78	|Q	|	|	V	|
19+55	6.2278	0.66	|Q	|	|	V	|
20+ 0	6.2322	0.63	|Q	|	|	V	|
20+ 5	6.2376	0.78	|Q	|	|	V	|
20+10	6.2438	0.91	|Q	|	|	V	|
20+15	6.2503	0.93	|Q	|	|	V	|
20+20	6.2567	0.94	|Q	|	|	V	|
20+25	6.2632	0.94	|Q	|	|	V	|

20+30	6.2697	0.94	|Q	|	|	|	V |
20+35	6.2762	0.94	|Q	|	|	|	V |
20+40	6.2827	0.94	|Q	|	|	|	V |
20+45	6.2891	0.94	|Q	|	|	|	V |
20+50	6.2945	0.78	|Q	|	|	|	V |
20+55	6.2991	0.66	|Q	|	|	|	V |
21+ 0	6.3034	0.63	|Q	|	|	|	V |
21+ 5	6.3088	0.78	|Q	|	|	|	V |
21+10	6.3151	0.91	|Q	|	|	|	V |
21+15	6.3215	0.93	|Q	|	|	|	V|
21+20	6.3269	0.78	|Q	|	|	|	V|
21+25	6.3314	0.66	|Q	|	|	|	V|
21+30	6.3358	0.63	|Q	|	|	|	V|
21+35	6.3412	0.78	|Q	|	|	|	V|
21+40	6.3475	0.91	|Q	|	|	|	V|
21+45	6.3539	0.93	|Q	|	|	|	V|
21+50	6.3593	0.78	|Q	|	|	|	V|
21+55	6.3638	0.66	|Q	|	|	|	V|
22+ 0	6.3682	0.63	|Q	|	|	|	V|
22+ 5	6.3736	0.78	|Q	|	|	|	V|
22+10	6.3799	0.91	|Q	|	|	|	V|
22+15	6.3863	0.93	|Q	|	|	|	V|
22+20	6.3917	0.78	|Q	|	|	|	V|
22+25	6.3962	0.66	|Q	|	|	|	V|
22+30	6.4006	0.63	|Q	|	|	|	V|
22+35	6.4049	0.63	|Q	|	|	|	V|
22+40	6.4092	0.63	|Q	|	|	|	V|
22+45	6.4135	0.63	|Q	|	|	|	V|
22+50	6.4179	0.63	|Q	|	|	|	V|
22+55	6.4222	0.63	|Q	|	|	|	V|
23+ 0	6.4265	0.63	|Q	|	|	|	V|
23+ 5	6.4308	0.63	|Q	|	|	|	V|
23+10	6.4351	0.63	|Q	|	|	|	V|
23+15	6.4394	0.63	|Q	|	|	|	V|
23+20	6.4438	0.63	|Q	|	|	|	V|
23+25	6.4481	0.63	|Q	|	|	|	V|
23+30	6.4524	0.63	|Q	|	|	|	V|
23+35	6.4567	0.63	|Q	|	|	|	V|
23+40	6.4610	0.63	|Q	|	|	|	V|
23+45	6.4654	0.63	|Q	|	|	|	V|
23+50	6.4697	0.63	|Q	|	|	|	V|
23+55	6.4740	0.63	|Q	|	|	|	V|
24+ 0	6.4783	0.63	|Q	|	|	|	V|
24+ 5	6.4805	0.31	Q	|	|	|	V|
24+10	6.4809	0.06	Q	|	|	|	V|
24+15	6.4810	0.01	Q	|	|	|	V|

APPENDIX D

Detention Analysis (Hydraflow)

Hydraflow Table of Contents

2 - Year

100 - Year

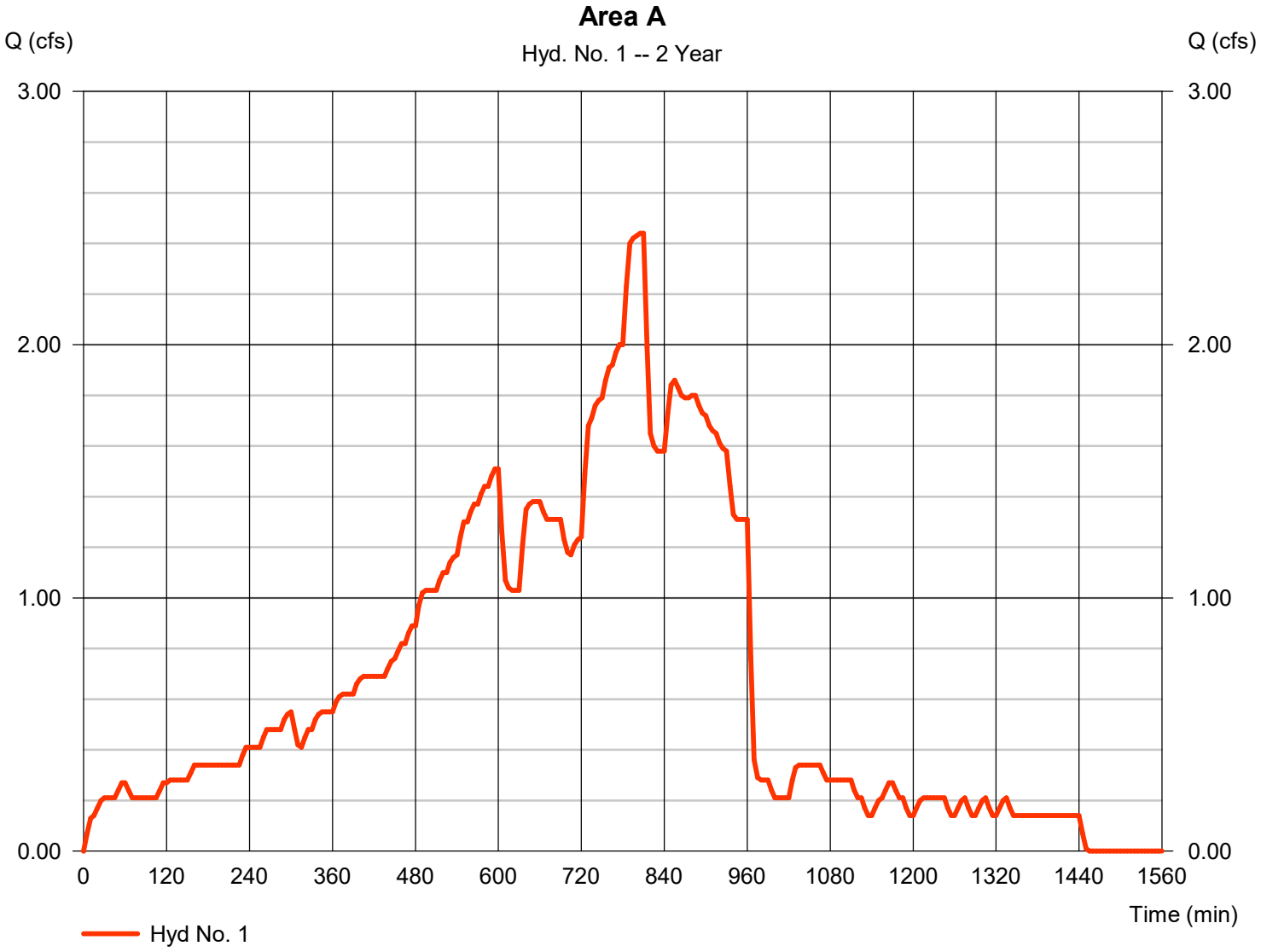
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2020.4 Thursday, 05 / 5 / 2022

Hyd. No. 1

Area A

Hydrograph type	= Manual	Peak discharge	= 2.440 cfs
Storm frequency	= 2 yrs	Time to peak	= 805 min
Time interval	= 5 min	Hyd. volume	= 62,136 cuft

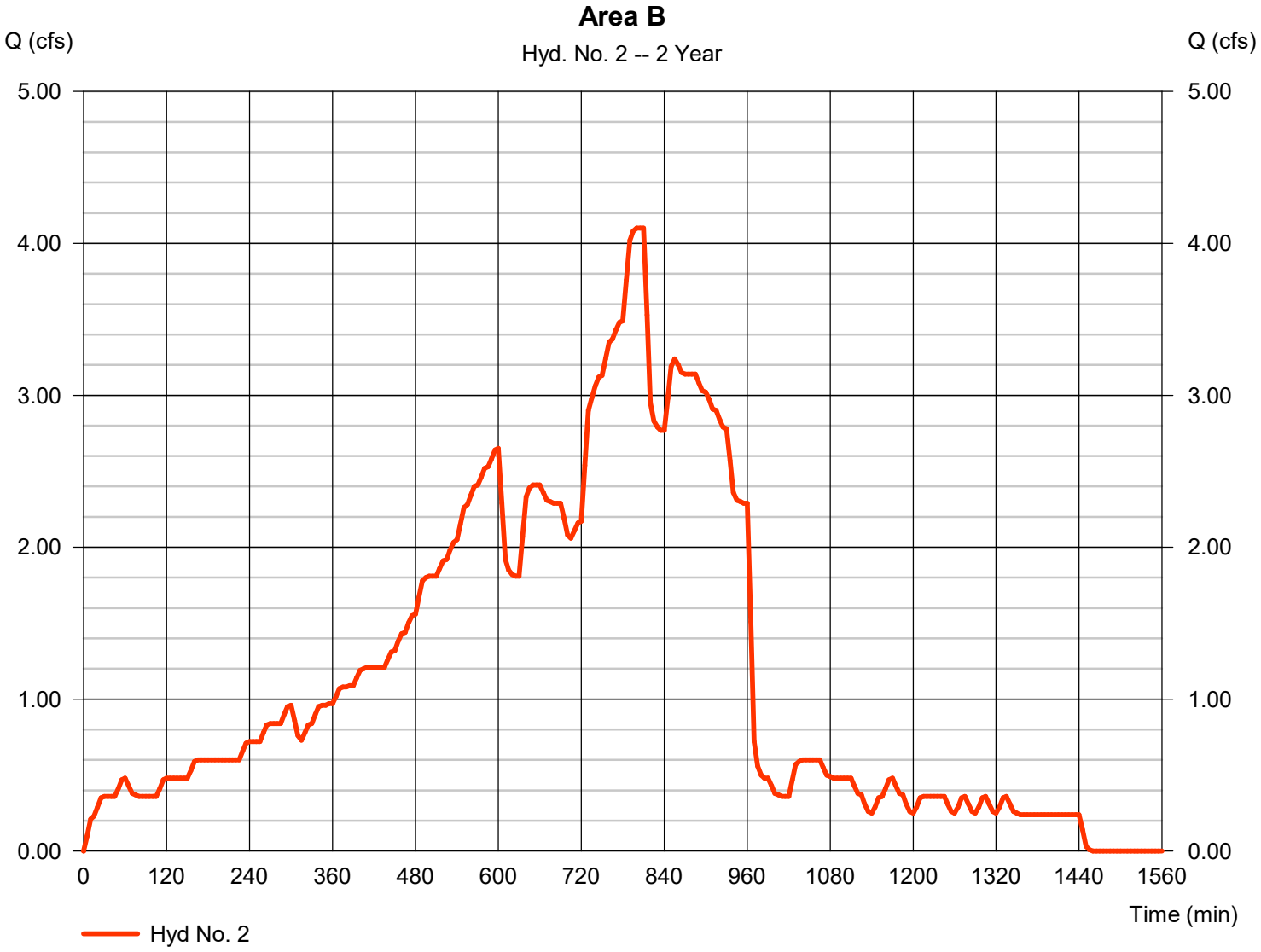


Hydrograph Report

Hyd. No. 2

Area B

Hydrograph type	= Manual	Peak discharge	= 4.100 cfs
Storm frequency	= 2 yrs	Time to peak	= 800 min
Time interval	= 5 min	Hyd. volume	= 108,564 cuft

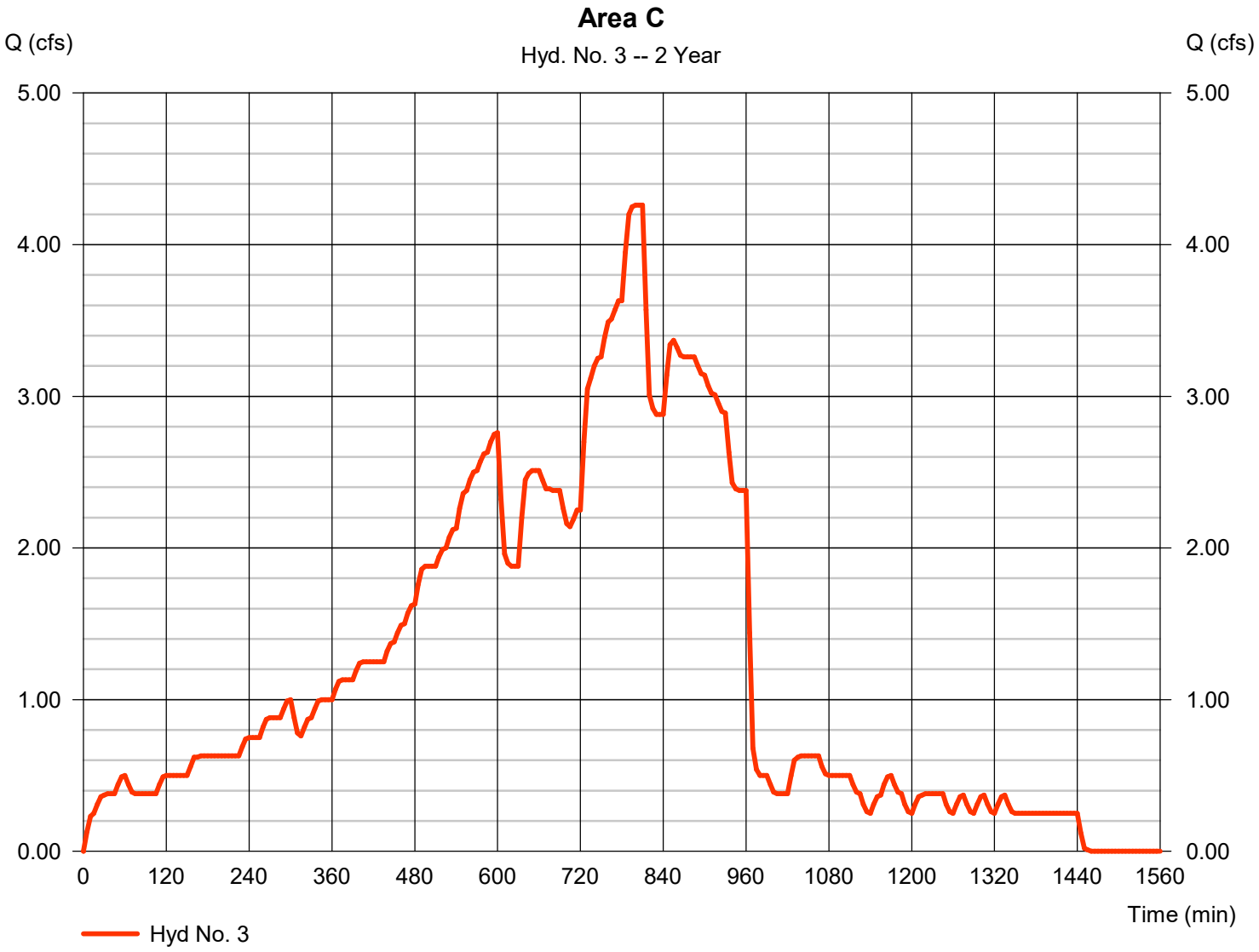


Hydrograph Report

Hyd. No. 3

Area C

Hydrograph type	= Manual	Peak discharge	= 4.260 cfs
Storm frequency	= 2 yrs	Time to peak	= 800 min
Time interval	= 5 min	Hyd. volume	= 112,857 cuft



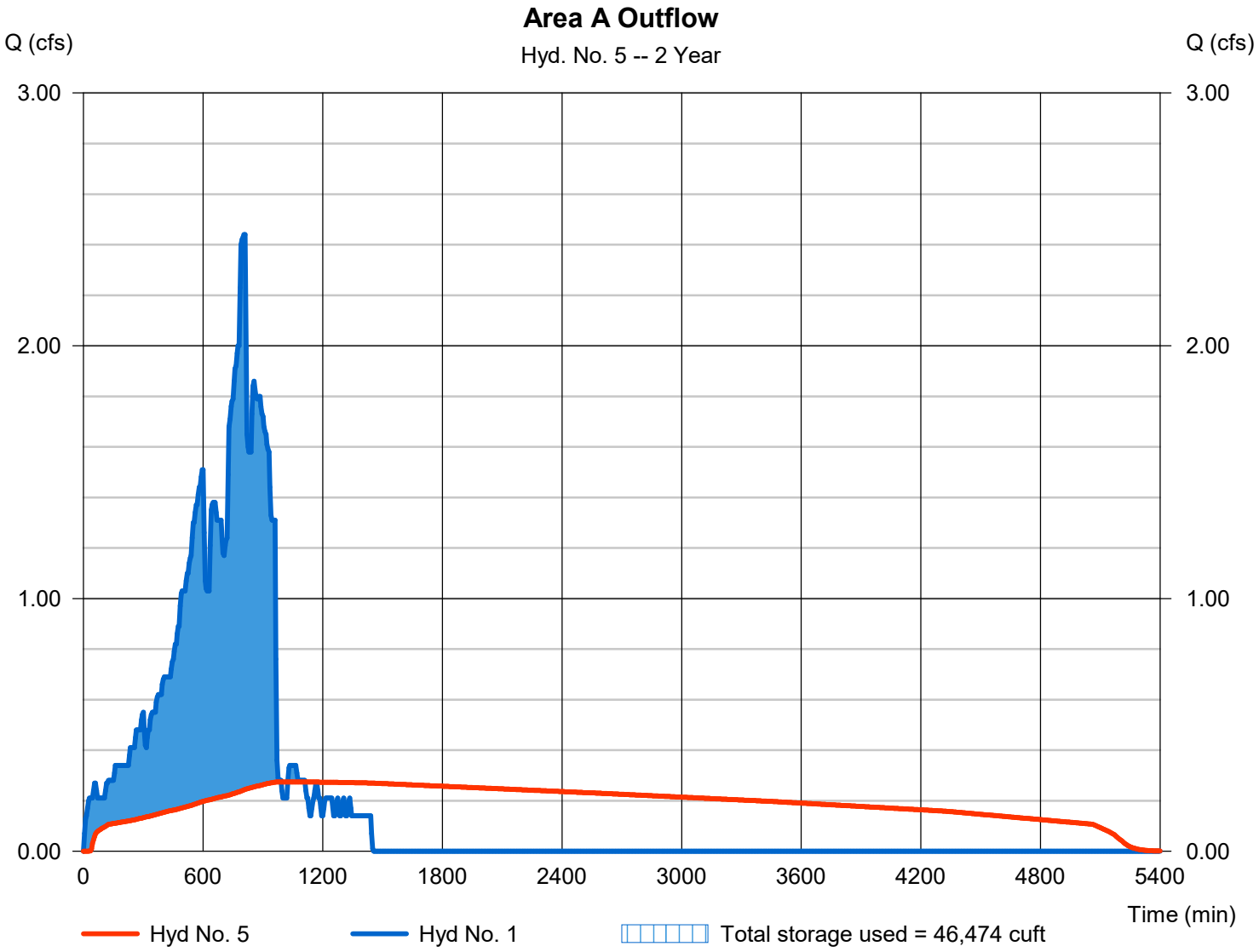
Hydrograph Report

Hyd. No. 5

Area A Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	0.274 cfs
Storm frequency	=	2 yrs	Time to peak	=	1110 min
Time interval	=	5 min	Hyd. volume	=	61,928 cuft
Inflow hyd. No.	=	1 - Area A	Max. Elevation	=	103.38 ft
Reservoir name	=	Detention System A	Max. Storage	=	46,474 cuft

Storage Indication method used.



Pond No. 1 - Detention System A

Pond Data

UG Chambers -Invert elev. = 100.00 ft, Rise x Span = 5.00 x 5.00 ft, Barrel Len = 990.00 ft, No. Barrels = 4, Slope = 0.10%, Headers = No

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	n/a	0	0
0.60	100.60	n/a	1,142	1,142
1.20	101.20	n/a	5,873	7,015
1.80	101.80	n/a	9,281	16,296
2.40	102.40	n/a	10,930	27,226
2.99	103.00	n/a	11,668	38,894
3.59	103.59	n/a	11,667	50,561
4.19	104.19	n/a	10,939	61,500
4.79	104.79	n/a	9,263	70,763
5.39	105.39	n/a	5,867	76,630
5.99	105.99	n/a	1,140	77,770

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 2.40	0.00	0.00	0.00
Span (in)	= 2.40	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 0.08	0.00	0.00	0.00
Slope (%)	= 0.10	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.75	0.00	0.00	0.00
Crest El. (ft)	= 103.45	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	100.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
0.06	114	100.06	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.000
0.12	228	100.12	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.001
0.18	343	100.18	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.002
0.24	457	100.24	0.04 oc	---	---	---	0.00	---	---	---	---	---	0.041
0.30	571	100.30	0.06 oc	---	---	---	0.00	---	---	---	---	---	0.064
0.36	685	100.36	0.08 ic	---	---	---	0.00	---	---	---	---	---	0.077
0.42	799	100.42	0.09 ic	---	---	---	0.00	---	---	---	---	---	0.085
0.48	913	100.48	0.09 ic	---	---	---	0.00	---	---	---	---	---	0.093
0.54	1,028	100.54	0.10 ic	---	---	---	0.00	---	---	---	---	---	0.100
0.60	1,142	100.60	0.11 ic	---	---	---	0.00	---	---	---	---	---	0.107
0.66	1,729	100.66	0.11 ic	---	---	---	0.00	---	---	---	---	---	0.113
0.72	2,317	100.72	0.12 ic	---	---	---	0.00	---	---	---	---	---	0.119
0.78	2,904	100.78	0.12 ic	---	---	---	0.00	---	---	---	---	---	0.125
0.84	3,491	100.84	0.13 ic	---	---	---	0.00	---	---	---	---	---	0.130
0.90	4,078	100.90	0.14 ic	---	---	---	0.00	---	---	---	---	---	0.135
0.96	4,666	100.96	0.14 ic	---	---	---	0.00	---	---	---	---	---	0.140
1.02	5,253	101.02	0.14 ic	---	---	---	0.00	---	---	---	---	---	0.145
1.08	5,840	101.08	0.15 ic	---	---	---	0.00	---	---	---	---	---	0.150
1.14	6,428	101.14	0.15 ic	---	---	---	0.00	---	---	---	---	---	0.154
1.20	7,015	101.20	0.16 ic	---	---	---	0.00	---	---	---	---	---	0.158
1.26	7,943	101.26	0.16 ic	---	---	---	0.00	---	---	---	---	---	0.163
1.32	8,871	101.32	0.17 ic	---	---	---	0.00	---	---	---	---	---	0.167
1.38	9,799	101.38	0.17 ic	---	---	---	0.00	---	---	---	---	---	0.171
1.44	10,727	101.44	0.17 ic	---	---	---	0.00	---	---	---	---	---	0.175
1.50	11,656	101.50	0.18 ic	---	---	---	0.00	---	---	---	---	---	0.179
1.56	12,584	101.56	0.18 ic	---	---	---	0.00	---	---	---	---	---	0.183
1.62	13,512	101.62	0.19 ic	---	---	---	0.00	---	---	---	---	---	0.186
1.68	14,440	101.68	0.19 ic	---	---	---	0.00	---	---	---	---	---	0.190
1.74	15,368	101.74	0.19 ic	---	---	---	0.00	---	---	---	---	---	0.194
1.80	16,296	101.80	0.20 ic	---	---	---	0.00	---	---	---	---	---	0.197
1.86	17,389	101.86	0.20 ic	---	---	---	0.00	---	---	---	---	---	0.200

Continues on next page...

Detention System A

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
1.92	18,482	101.92	0.20 ic	---	---	---	0.00	---	---	---	---	---	0.204
1.98	19,575	101.98	0.21 ic	---	---	---	0.00	---	---	---	---	---	0.207
2.04	20,668	102.04	0.21 ic	---	---	---	0.00	---	---	---	---	---	0.210
2.10	21,761	102.10	0.21 ic	---	---	---	0.00	---	---	---	---	---	0.214
2.16	22,854	102.16	0.22 ic	---	---	---	0.00	---	---	---	---	---	0.217
2.22	23,947	102.22	0.22 ic	---	---	---	0.00	---	---	---	---	---	0.220
2.28	25,040	102.28	0.22 ic	---	---	---	0.00	---	---	---	---	---	0.223
2.34	26,133	102.34	0.23 ic	---	---	---	0.00	---	---	---	---	---	0.226
2.40	27,226	102.40	0.23 ic	---	---	---	0.00	---	---	---	---	---	0.229
2.46	28,393	102.46	0.23 ic	---	---	---	0.00	---	---	---	---	---	0.232
2.52	29,559	102.52	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.235
2.58	30,726	102.58	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.238
2.64	31,893	102.64	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.241
2.70	33,060	102.70	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.244
2.76	34,227	102.76	0.25 ic	---	---	---	0.00	---	---	---	---	---	0.246
2.82	35,393	102.82	0.25 ic	---	---	---	0.00	---	---	---	---	---	0.249
2.88	36,560	102.88	0.25 ic	---	---	---	0.00	---	---	---	---	---	0.252
2.94	37,727	102.94	0.25 ic	---	---	---	0.00	---	---	---	---	---	0.255
2.99	38,894	103.00	0.26 ic	---	---	---	0.00	---	---	---	---	---	0.257
3.05	40,061	103.05	0.26 ic	---	---	---	0.00	---	---	---	---	---	0.260
3.11	41,227	103.11	0.26 ic	---	---	---	0.00	---	---	---	---	---	0.263
3.17	42,394	103.17	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.265
3.23	43,561	103.23	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.268
3.29	44,727	103.29	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.270
3.35	45,894	103.35	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.273
3.41	47,061	103.41	0.28 ic	---	---	---	0.00	---	---	---	---	---	0.275
3.47	48,227	103.47	0.28 ic	---	---	---	0.01	---	---	---	---	---	0.287
3.53	49,394	103.53	0.28 ic	---	---	---	0.06	---	---	---	---	---	0.341
3.59	50,561	103.59	0.28 ic	---	---	---	0.14	---	---	---	---	---	0.419
3.65	51,655	103.65	0.29 ic	---	---	---	0.23	---	---	---	---	---	0.515
3.71	52,749	103.71	0.29 ic	---	---	---	0.34	---	---	---	---	---	0.626
3.77	53,843	103.77	0.29 ic	---	---	---	0.46	---	---	---	---	---	0.750
3.83	54,937	103.83	0.29 ic	---	---	---	0.59	---	---	---	---	---	0.886
3.89	56,031	103.89	0.29 ic	---	---	---	0.74	---	---	---	---	---	1.032
3.95	57,124	103.95	0.30 ic	---	---	---	0.89	---	---	---	---	---	1.189
4.01	58,218	104.01	0.30 ic	---	---	---	1.06	---	---	---	---	---	1.355
4.07	59,312	104.07	0.30 ic	---	---	---	1.23	---	---	---	---	---	1.530
4.13	60,406	104.13	0.30 ic	---	---	---	1.41	---	---	---	---	---	1.714
4.19	61,500	104.19	0.31 ic	---	---	---	1.60	---	---	---	---	---	1.906
4.25	62,426	104.25	0.31 ic	---	---	---	1.80	---	---	---	---	---	2.105
4.31	63,353	104.31	0.31 ic	---	---	---	2.00	---	---	---	---	---	2.312
4.37	64,279	104.37	0.31 ic	---	---	---	2.21	---	---	---	---	---	2.526
4.43	65,205	104.43	0.31 ic	---	---	---	2.43	---	---	---	---	---	2.747
4.49	66,131	104.49	0.32 ic	---	---	---	2.66	---	---	---	---	---	2.975
4.55	67,058	104.55	0.32 ic	---	---	---	2.89	---	---	---	---	---	3.210
4.61	67,984	104.61	0.32 ic	---	---	---	3.13	---	---	---	---	---	3.451
4.67	68,910	104.67	0.32 ic	---	---	---	3.37	---	---	---	---	---	3.698
4.73	69,837	104.73	0.33 ic	---	---	---	3.63	---	---	---	---	---	3.951
4.79	70,763	104.79	0.33 ic	---	---	---	3.88	---	---	---	---	---	4.210
4.85	71,350	104.85	0.33 ic	---	---	---	4.15	---	---	---	---	---	4.475
4.91	71,936	104.91	0.33 ic	---	---	---	4.41	---	---	---	---	---	4.746
4.97	72,523	104.97	0.33 ic	---	---	---	4.69	---	---	---	---	---	5.022
5.03	73,110	105.03	0.34 ic	---	---	---	4.97	---	---	---	---	---	5.304
5.09	73,696	105.09	0.34 ic	---	---	---	5.25	---	---	---	---	---	5.590
5.15	74,283	105.15	0.34 ic	---	---	---	5.54	---	---	---	---	---	5.883
5.21	74,870	105.21	0.34 ic	---	---	---	5.84	---	---	---	---	---	6.180
5.27	75,457	105.27	0.34 ic	---	---	---	6.14	---	---	---	---	---	6.482
5.33	76,043	105.33	0.35 ic	---	---	---	6.44	---	---	---	---	---	6.789
5.39	76,630	105.39	0.35 ic	---	---	---	6.75	---	---	---	---	---	7.102
5.45	76,744	105.45	0.35 ic	---	---	---	7.07	---	---	---	---	---	7.419
5.51	76,858	105.51	0.35 ic	---	---	---	7.39	---	---	---	---	---	7.740
5.57	76,972	105.57	0.35 ic	---	---	---	7.71	---	---	---	---	---	8.067
5.63	77,086	105.63	0.36 ic	---	---	---	8.04	---	---	---	---	---	8.398
5.69	77,200	105.69	0.36 ic	---	---	---	8.38	---	---	---	---	---	8.733
5.75	77,314	105.75	0.36 ic	---	---	---	8.71	---	---	---	---	---	9.073
5.81	77,428	105.81	0.36 ic	---	---	---	9.06	---	---	---	---	---	9.418
5.87	77,542	105.87	0.36 ic	---	---	---	9.40	---	---	---	---	---	9.767
5.93	77,656	105.93	0.37 ic	---	---	---	9.75	---	---	---	---	---	10.12
5.99	77,770	105.99	0.37 ic	---	---	---	10.11	---	---	---	---	---	10.48

...End

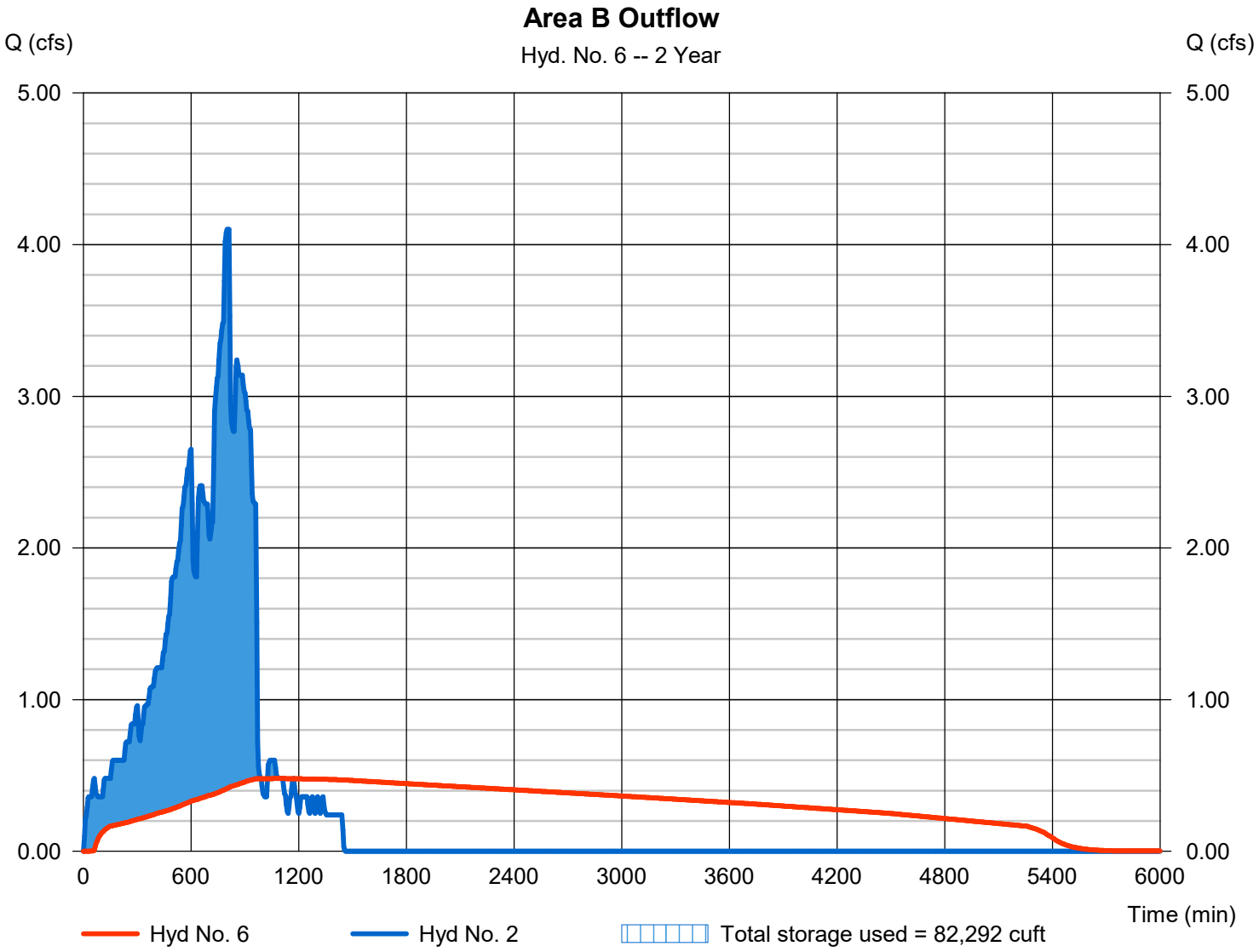
Hydrograph Report

Hyd. No. 6

Area B Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	0.479 cfs
Storm frequency	=	2 yrs	Time to peak	=	1110 min
Time interval	=	5 min	Hyd. volume	=	108,103 cuft
Inflow hyd. No.	=	2 - Area B	Max. Elevation	=	103.74 ft
Reservoir name	=	Detention System B	Max. Storage	=	82,292 cuft

Storage Indication method used.



Pond No. 2 - Detention System B

Pond Data

UG Chambers -Invert elev. = 100.00 ft, Rise x Span = 5.00 x 5.00 ft, Barrel Len = 570.00 ft, No. Barrels = 10, Slope = 0.10%, Headers = No

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	n/a	0	0
0.56	100.56	n/a	2,722	2,722
1.11	101.11	n/a	9,600	12,323
1.67	101.67	n/a	13,060	25,383
2.23	102.23	n/a	14,900	40,283
2.79	102.79	n/a	15,707	55,990
3.34	103.34	n/a	15,716	71,706
3.90	103.90	n/a	14,874	86,579
4.46	104.46	n/a	13,057	99,637
5.01	105.01	n/a	9,590	109,226
5.57	105.57	n/a	2,715	111,942

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 3.10	0.00	0.00	0.00
Span (in)	= 3.10	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 0.08	0.00	0.00	0.00
Slope (%)	= 0.10	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 2.00	0.00	0.00	0.00
Crest El. (ft)	= 103.80	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	100.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
0.06	272	100.06	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.000
0.11	544	100.11	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.001
0.17	817	100.17	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.002
0.22	1,089	100.22	0.00 oc	---	---	---	0.00	---	---	---	---	---	0.003
0.28	1,361	100.28	0.05 oc	---	---	---	0.00	---	---	---	---	---	0.049
0.33	1,633	100.33	0.09 oc	---	---	---	0.00	---	---	---	---	---	0.094
0.39	1,906	100.39	0.12 oc	---	---	---	0.00	---	---	---	---	---	0.124
0.45	2,178	100.45	0.14 ic	---	---	---	0.00	---	---	---	---	---	0.142
0.50	2,450	100.50	0.15 ic	---	---	---	0.00	---	---	---	---	---	0.154
0.56	2,722	100.56	0.17 ic	---	---	---	0.00	---	---	---	---	---	0.165
0.61	3,682	100.61	0.18 ic	---	---	---	0.00	---	---	---	---	---	0.175
0.67	4,642	100.67	0.19 ic	---	---	---	0.00	---	---	---	---	---	0.185
0.72	5,602	100.72	0.19 ic	---	---	---	0.00	---	---	---	---	---	0.195
0.78	6,562	100.78	0.20 ic	---	---	---	0.00	---	---	---	---	---	0.204
0.84	7,522	100.84	0.21 ic	---	---	---	0.00	---	---	---	---	---	0.212
0.89	8,482	100.89	0.22 ic	---	---	---	0.00	---	---	---	---	---	0.220
0.95	9,443	100.95	0.23 ic	---	---	---	0.00	---	---	---	---	---	0.228
1.00	10,403	101.00	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.236
1.06	11,363	101.06	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.243
1.11	12,323	101.11	0.25 ic	---	---	---	0.00	---	---	---	---	---	0.250
1.17	13,629	101.17	0.26 ic	---	---	---	0.00	---	---	---	---	---	0.257
1.23	14,935	101.23	0.26 ic	---	---	---	0.00	---	---	---	---	---	0.264
1.28	16,241	101.28	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.271
1.34	17,547	101.34	0.28 ic	---	---	---	0.00	---	---	---	---	---	0.277
1.39	18,853	101.39	0.28 ic	---	---	---	0.00	---	---	---	---	---	0.284
1.45	20,159	101.45	0.29 ic	---	---	---	0.00	---	---	---	---	---	0.290
1.50	21,465	101.50	0.30 ic	---	---	---	0.00	---	---	---	---	---	0.296
1.56	22,771	101.56	0.30 ic	---	---	---	0.00	---	---	---	---	---	0.302
1.62	24,077	101.62	0.31 ic	---	---	---	0.00	---	---	---	---	---	0.308
1.67	25,383	101.67	0.31 ic	---	---	---	0.00	---	---	---	---	---	0.313
1.73	26,873	101.73	0.32 ic	---	---	---	0.00	---	---	---	---	---	0.319

Continues on next page...

Detention System B

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
1.78	28,363	101.78	0.32 ic	---	---	---	0.00	---	---	---	---	---	0.324
1.84	29,853	101.84	0.33 ic	---	---	---	0.00	---	---	---	---	---	0.330
1.89	31,343	101.89	0.34 ic	---	---	---	0.00	---	---	---	---	---	0.335
1.95	32,833	101.95	0.34 ic	---	---	---	0.00	---	---	---	---	---	0.340
2.01	34,323	102.01	0.35 ic	---	---	---	0.00	---	---	---	---	---	0.346
2.06	35,813	102.06	0.35 ic	---	---	---	0.00	---	---	---	---	---	0.351
2.12	37,303	102.12	0.36 ic	---	---	---	0.00	---	---	---	---	---	0.356
2.17	38,793	102.17	0.36 ic	---	---	---	0.00	---	---	---	---	---	0.361
2.23	40,283	102.23	0.37 ic	---	---	---	0.00	---	---	---	---	---	0.366
2.28	41,854	102.28	0.37 ic	---	---	---	0.00	---	---	---	---	---	0.370
2.34	43,424	102.34	0.38 ic	---	---	---	0.00	---	---	---	---	---	0.375
2.40	44,995	102.40	0.38 ic	---	---	---	0.00	---	---	---	---	---	0.380
2.45	46,566	102.45	0.38 ic	---	---	---	0.00	---	---	---	---	---	0.384
2.51	48,136	102.51	0.39 ic	---	---	---	0.00	---	---	---	---	---	0.389
2.56	49,707	102.56	0.39 ic	---	---	---	0.00	---	---	---	---	---	0.394
2.62	51,278	102.62	0.40 ic	---	---	---	0.00	---	---	---	---	---	0.398
2.67	52,848	102.67	0.40 ic	---	---	---	0.00	---	---	---	---	---	0.403
2.73	54,419	102.73	0.41 ic	---	---	---	0.00	---	---	---	---	---	0.407
2.79	55,990	102.79	0.41 ic	---	---	---	0.00	---	---	---	---	---	0.411
2.84	57,561	102.84	0.42 ic	---	---	---	0.00	---	---	---	---	---	0.416
2.90	59,133	102.90	0.42 ic	---	---	---	0.00	---	---	---	---	---	0.420
2.95	60,704	102.95	0.42 ic	---	---	---	0.00	---	---	---	---	---	0.424
3.01	62,276	103.01	0.43 ic	---	---	---	0.00	---	---	---	---	---	0.428
3.06	63,848	103.06	0.43 ic	---	---	---	0.00	---	---	---	---	---	0.432
3.12	65,419	103.12	0.44 ic	---	---	---	0.00	---	---	---	---	---	0.436
3.17	66,991	103.17	0.44 ic	---	---	---	0.00	---	---	---	---	---	0.440
3.23	68,562	103.23	0.44 ic	---	---	---	0.00	---	---	---	---	---	0.444
3.29	70,134	103.29	0.45 ic	---	---	---	0.00	---	---	---	---	---	0.448
3.34	71,706	103.34	0.45 ic	---	---	---	0.00	---	---	---	---	---	0.452
3.40	73,193	103.40	0.46 ic	---	---	---	0.00	---	---	---	---	---	0.456
3.45	74,680	103.45	0.46 ic	---	---	---	0.00	---	---	---	---	---	0.460
3.51	76,168	103.51	0.46 ic	---	---	---	0.00	---	---	---	---	---	0.464
3.56	77,655	103.56	0.47 ic	---	---	---	0.00	---	---	---	---	---	0.468
3.62	79,143	103.62	0.47 ic	---	---	---	0.00	---	---	---	---	---	0.472
3.68	80,630	103.68	0.48 ic	---	---	---	0.00	---	---	---	---	---	0.475
3.73	82,117	103.73	0.48 ic	---	---	---	0.00	---	---	---	---	---	0.479
3.79	83,605	103.79	0.48 ic	---	---	---	0.00	---	---	---	---	---	0.483
3.84	85,092	103.84	0.49 ic	---	---	---	0.06	---	---	---	---	---	0.546
3.90	86,579	103.90	0.49 ic	---	---	---	0.21	---	---	---	---	---	0.697
3.95	87,885	103.95	0.49 ic	---	---	---	0.41	---	---	---	---	---	0.899
4.01	89,191	104.01	0.50 ic	---	---	---	0.64	---	---	---	---	---	1.140
4.07	90,497	104.07	0.50 ic	---	---	---	0.91	---	---	---	---	---	1.415
4.12	91,802	104.12	0.50 ic	---	---	---	1.22	---	---	---	---	---	1.720
4.18	93,108	104.18	0.51 ic	---	---	---	1.54	---	---	---	---	---	2.053
4.23	94,414	104.23	0.51 ic	---	---	---	1.90	---	---	---	---	---	2.410
4.29	95,719	104.29	0.51 ic	---	---	---	2.28	---	---	---	---	---	2.791
4.34	97,025	104.34	0.52 ic	---	---	---	2.68	---	---	---	---	---	3.195
4.40	98,331	104.40	0.52 ic	---	---	---	3.10	---	---	---	---	---	3.619
4.46	99,637	104.46	0.52 ic	---	---	---	3.54	---	---	---	---	---	4.063
4.51	100,596	104.51	0.53 ic	---	---	---	4.00	---	---	---	---	---	4.527
4.57	101,555	104.57	0.53 ic	---	---	---	4.48	---	---	---	---	---	5.009
4.62	102,513	104.62	0.53 ic	---	---	---	4.97	---	---	---	---	---	5.508
4.68	103,472	104.68	0.54 ic	---	---	---	5.49	---	---	---	---	---	6.025
4.73	104,431	104.73	0.54 ic	---	---	---	6.02	---	---	---	---	---	6.558
4.79	105,390	104.79	0.54 ic	---	---	---	6.56	---	---	---	---	---	7.107
4.85	106,349	104.85	0.55 ic	---	---	---	7.12	---	---	---	---	---	7.672
4.90	107,308	104.90	0.55 ic	---	---	---	7.70	---	---	---	---	---	8.252
4.96	108,267	104.96	0.55 ic	---	---	---	8.29	---	---	---	---	---	8.846
5.01	109,226	105.01	0.56 ic	---	---	---	8.90	---	---	---	---	---	9.455
5.07	109,498	105.07	0.56 ic	---	---	---	9.52	---	---	---	---	---	10.08
5.12	109,769	105.12	0.56 ic	---	---	---	10.15	---	---	---	---	---	10.71
5.18	110,041	105.18	0.57 ic	---	---	---	10.80	---	---	---	---	---	11.37
5.24	110,312	105.24	0.57 ic	---	---	---	11.46	---	---	---	---	---	12.03
5.29	110,584	105.29	0.57 ic	---	---	---	12.13	---	---	---	---	---	12.70
5.35	110,856	105.35	0.58 ic	---	---	---	12.82	---	---	---	---	---	13.39
5.40	111,127	105.40	0.58 ic	---	---	---	13.52	---	---	---	---	---	14.10
5.46	111,399	105.46	0.58 ic	---	---	---	14.23	---	---	---	---	---	14.81
5.51	111,670	105.51	0.59 ic	---	---	---	14.95	---	---	---	---	---	15.53
5.57	111,942	105.57	0.59 ic	---	---	---	15.68	---	---	---	---	---	16.27

...End

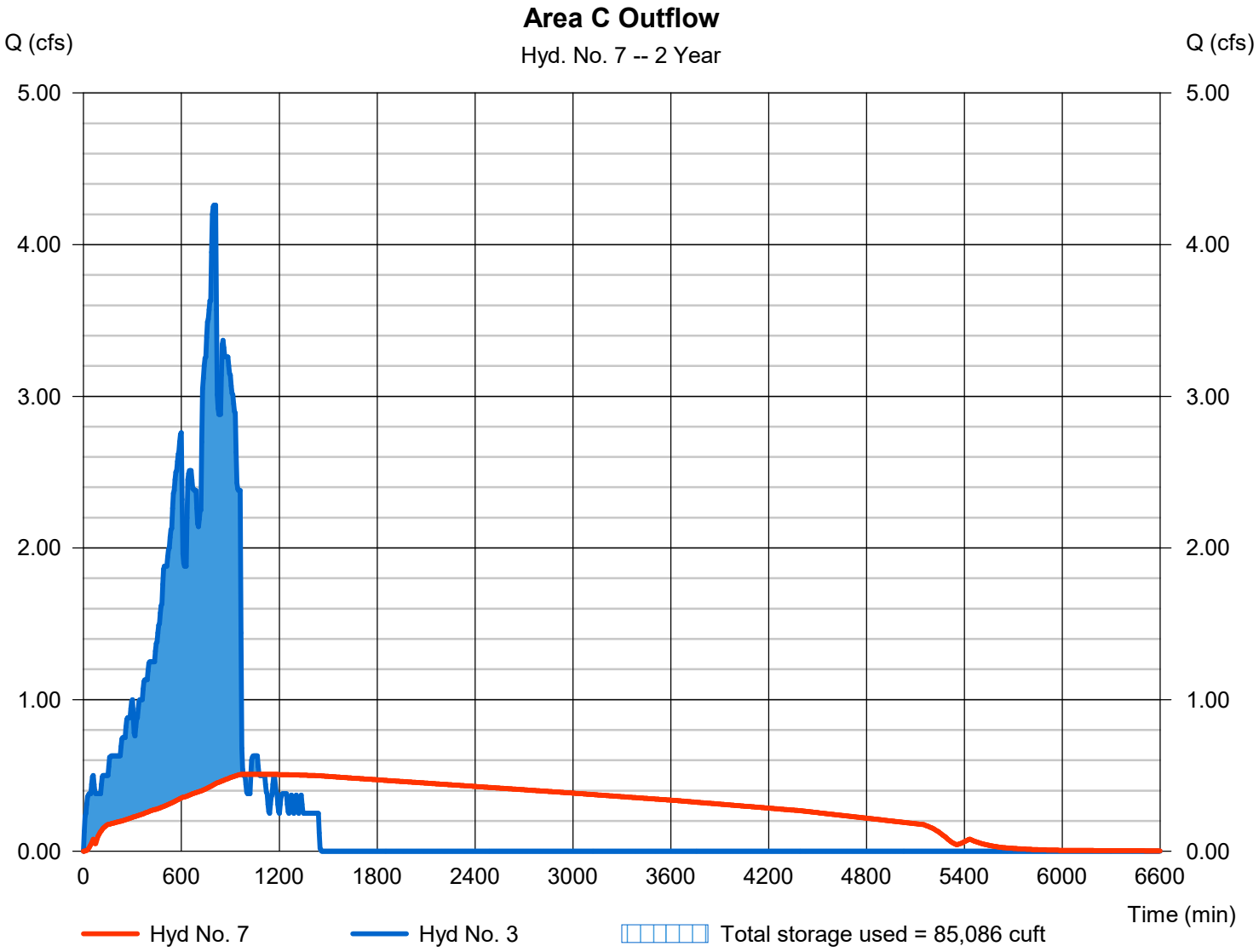
Hydrograph Report

Hyd. No. 7

Area C Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	0.508 cfs
Storm frequency	=	2 yrs	Time to peak	=	1075 min
Time interval	=	5 min	Hyd. volume	=	112,817 cuft
Inflow hyd. No.	=	3 - Area C	Max. Elevation	=	103.70 ft
Reservoir name	=	Detention System C	Max. Storage	=	85,086 cuft

Storage Indication method used.



Pond No. 3 - Detention System C

Pond Data

UG Chambers -Invert elev. = 100.00 ft, Rise x Span = 5.00 x 5.00 ft, Barrel Len = 600.00 ft, No. Barrels = 10, Slope = 0.10%, Headers = No

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	100.00	n/a	0	0
0.56	100.56	n/a	2,767	2,767
1.12	101.12	n/a	10,019	12,786
1.68	101.68	n/a	13,792	26,578
2.24	102.24	n/a	15,733	42,311
2.80	102.80	n/a	16,626	58,936
3.36	103.36	n/a	16,624	75,560
3.92	103.92	n/a	15,723	91,283
4.48	104.48	n/a	13,783	105,066
5.04	105.04	n/a	10,010	115,076
5.60	105.60	n/a	2,758	117,833

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 3.20	0.00	0.00	0.00
Span (in)	= 3.20	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 100.00	0.00	0.00	0.00
Length (ft)	= 0.08	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 2.20	0.00	0.00	0.00
Crest El. (ft)	= 103.80	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= Rect	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Contour)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	100.00	0.00	---	---	---	0.00	---	---	---	---	---	0.000
0.06	277	100.06	0.01 ic	---	---	---	0.00	---	---	---	---	---	0.007
0.11	553	100.11	0.03 ic	---	---	---	0.00	---	---	---	---	---	0.025
0.17	830	100.17	0.05 ic	---	---	---	0.00	---	---	---	---	---	0.052
0.22	1,107	100.22	0.08 ic	---	---	---	0.00	---	---	---	---	---	0.081
0.28	1,384	100.28	0.04 oc	---	---	---	0.00	---	---	---	---	---	0.042
0.34	1,660	100.34	0.10 oc	---	---	---	0.00	---	---	---	---	---	0.096
0.39	1,937	100.39	0.13 oc	---	---	---	0.00	---	---	---	---	---	0.129
0.45	2,214	100.45	0.15 ic	---	---	---	0.00	---	---	---	---	---	0.151
0.50	2,490	100.50	0.16 ic	---	---	---	0.00	---	---	---	---	---	0.164
0.56	2,767	100.56	0.18 ic	---	---	---	0.00	---	---	---	---	---	0.176
0.62	3,769	100.62	0.19 ic	---	---	---	0.00	---	---	---	---	---	0.187
0.67	4,771	100.67	0.20 ic	---	---	---	0.00	---	---	---	---	---	0.197
0.73	5,773	100.73	0.21 ic	---	---	---	0.00	---	---	---	---	---	0.207
0.78	6,775	100.78	0.22 ic	---	---	---	0.00	---	---	---	---	---	0.217
0.84	7,776	100.84	0.23 ic	---	---	---	0.00	---	---	---	---	---	0.226
0.90	8,778	100.90	0.23 ic	---	---	---	0.00	---	---	---	---	---	0.235
0.95	9,780	100.95	0.24 ic	---	---	---	0.00	---	---	---	---	---	0.243
1.01	10,782	101.01	0.25 ic	---	---	---	0.00	---	---	---	---	---	0.251
1.06	11,784	101.06	0.26 ic	---	---	---	0.00	---	---	---	---	---	0.259
1.12	12,786	101.12	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.267
1.18	14,165	101.18	0.27 ic	---	---	---	0.00	---	---	---	---	---	0.275
1.23	15,544	101.23	0.28 ic	---	---	---	0.00	---	---	---	---	---	0.282
1.29	16,923	101.29	0.29 ic	---	---	---	0.00	---	---	---	---	---	0.289
1.34	18,303	101.34	0.30 ic	---	---	---	0.00	---	---	---	---	---	0.296
1.40	19,682	101.40	0.30 ic	---	---	---	0.00	---	---	---	---	---	0.303
1.46	21,061	101.46	0.31 ic	---	---	---	0.00	---	---	---	---	---	0.309
1.51	22,440	101.51	0.32 ic	---	---	---	0.00	---	---	---	---	---	0.316
1.57	23,819	101.57	0.32 ic	---	---	---	0.00	---	---	---	---	---	0.322
1.62	25,199	101.62	0.33 ic	---	---	---	0.00	---	---	---	---	---	0.328
1.68	26,578	101.68	0.33 ic	---	---	---	0.00	---	---	---	---	---	0.334
1.74	28,151	101.74	0.34 ic	---	---	---	0.00	---	---	---	---	---	0.340

Continues on next page...

Detention System C

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
1.79	29,724	101.79	0.35 ic	---	---	---	0.00	---	---	---	---	---	0.346
1.85	31,298	101.85	0.35 ic	---	---	---	0.00	---	---	---	---	---	0.352
1.90	32,871	101.90	0.36 ic	---	---	---	0.00	---	---	---	---	---	0.358
1.96	34,444	101.96	0.36 ic	---	---	---	0.00	---	---	---	---	---	0.363
2.02	36,018	102.02	0.37 ic	---	---	---	0.00	---	---	---	---	---	0.369
2.07	37,591	102.07	0.37 ic	---	---	---	0.00	---	---	---	---	---	0.374
2.13	39,164	102.13	0.38 ic	---	---	---	0.00	---	---	---	---	---	0.380
2.18	40,737	102.18	0.39 ic	---	---	---	0.00	---	---	---	---	---	0.385
2.24	42,311	102.24	0.39 ic	---	---	---	0.00	---	---	---	---	---	0.390
2.30	43,973	102.30	0.40 ic	---	---	---	0.00	---	---	---	---	---	0.395
2.35	45,636	102.35	0.40 ic	---	---	---	0.00	---	---	---	---	---	0.401
2.41	47,298	102.41	0.41 ic	---	---	---	0.00	---	---	---	---	---	0.406
2.46	48,961	102.46	0.41 ic	---	---	---	0.00	---	---	---	---	---	0.410
2.52	50,624	102.52	0.42 ic	---	---	---	0.00	---	---	---	---	---	0.415
2.58	52,286	102.58	0.42 ic	---	---	---	0.00	---	---	---	---	---	0.420
2.63	53,949	102.63	0.43 ic	---	---	---	0.00	---	---	---	---	---	0.425
2.69	55,611	102.69	0.43 ic	---	---	---	0.00	---	---	---	---	---	0.430
2.74	57,274	102.74	0.43 ic	---	---	---	0.00	---	---	---	---	---	0.434
2.80	58,936	102.80	0.44 ic	---	---	---	0.00	---	---	---	---	---	0.439
2.86	60,599	102.86	0.44 ic	---	---	---	0.00	---	---	---	---	---	0.444
2.91	62,261	102.91	0.45 ic	---	---	---	0.00	---	---	---	---	---	0.448
2.97	63,923	102.97	0.45 ic	---	---	---	0.00	---	---	---	---	---	0.453
3.02	65,586	103.02	0.46 ic	---	---	---	0.00	---	---	---	---	---	0.457
3.08	67,248	103.08	0.46 ic	---	---	---	0.00	---	---	---	---	---	0.462
3.14	68,910	103.14	0.47 ic	---	---	---	0.00	---	---	---	---	---	0.466
3.19	70,573	103.19	0.47 ic	---	---	---	0.00	---	---	---	---	---	0.470
3.25	72,235	103.25	0.47 ic	---	---	---	0.00	---	---	---	---	---	0.475
3.30	73,898	103.30	0.48 ic	---	---	---	0.00	---	---	---	---	---	0.479
3.36	75,560	103.36	0.48 ic	---	---	---	0.00	---	---	---	---	---	0.483
3.42	77,132	103.42	0.49 ic	---	---	---	0.00	---	---	---	---	---	0.487
3.47	78,704	103.47	0.49 ic	---	---	---	0.00	---	---	---	---	---	0.491
3.53	80,277	103.53	0.50 ic	---	---	---	0.00	---	---	---	---	---	0.495
3.58	81,849	103.58	0.50 ic	---	---	---	0.00	---	---	---	---	---	0.499
3.64	83,421	103.64	0.50 ic	---	---	---	0.00	---	---	---	---	---	0.504
3.70	84,993	103.70	0.51 ic	---	---	---	0.00	---	---	---	---	---	0.508
3.75	86,566	103.75	0.51 ic	---	---	---	0.00	---	---	---	---	---	0.511
3.81	88,138	103.81	0.52 ic	---	---	---	0.01	---	---	---	---	---	0.521
3.86	89,710	103.86	0.52 ic	---	---	---	0.12	---	---	---	---	---	0.638
3.92	91,283	103.92	0.52 ic	---	---	---	0.30	---	---	---	---	---	0.828
3.98	92,661	103.98	0.53 ic	---	---	---	0.54	---	---	---	---	---	1.068
4.03	94,039	104.03	0.53 ic	---	---	---	0.82	---	---	---	---	---	1.350
4.09	95,418	104.09	0.53 ic	---	---	---	1.13	---	---	---	---	---	1.667
4.14	96,796	104.14	0.54 ic	---	---	---	1.48	---	---	---	---	---	2.017
4.20	98,174	104.20	0.54 ic	---	---	---	1.85	---	---	---	---	---	2.396
4.26	99,553	104.26	0.55 ic	---	---	---	2.26	---	---	---	---	---	2.802
4.31	100,931	104.31	0.55 ic	---	---	---	2.68	---	---	---	---	---	3.234
4.37	102,309	104.37	0.55 ic	---	---	---	3.14	---	---	---	---	---	3.689
4.42	103,688	104.42	0.56 ic	---	---	---	3.61	---	---	---	---	---	4.168
4.48	105,066	104.48	0.56 ic	---	---	---	4.11	---	---	---	---	---	4.669
4.54	106,067	104.54	0.56 ic	---	---	---	4.63	---	---	---	---	---	5.190
4.59	107,068	104.59	0.57 ic	---	---	---	5.16	---	---	---	---	---	5.731
4.65	108,069	104.65	0.57 ic	---	---	---	5.72	---	---	---	---	---	6.292
4.70	109,070	104.70	0.57 ic	---	---	---	6.30	---	---	---	---	---	6.872
4.76	110,071	104.76	0.58 ic	---	---	---	6.89	---	---	---	---	---	7.469
4.82	111,072	104.82	0.58 ic	---	---	---	7.50	---	---	---	---	---	8.084
4.87	112,073	104.87	0.59 ic	---	---	---	8.13	---	---	---	---	---	8.717
4.93	113,074	104.93	0.59 ic	---	---	---	8.78	---	---	---	---	---	9.365
4.98	114,075	104.98	0.59 ic	---	---	---	9.44	---	---	---	---	---	10.03
5.04	115,076	105.04	0.60 ic	---	---	---	10.12	---	---	---	---	---	10.71
5.10	115,352	105.10	0.60 ic	---	---	---	10.81	---	---	---	---	---	11.41
5.15	115,627	105.15	0.60 ic	---	---	---	11.52	---	---	---	---	---	12.12
5.21	115,903	105.21	0.61 ic	---	---	---	12.24	---	---	---	---	---	12.85
5.26	116,179	105.26	0.61 ic	---	---	---	12.98	---	---	---	---	---	13.59
5.32	116,455	105.32	0.61 ic	---	---	---	13.73	---	---	---	---	---	14.34
5.38	116,730	105.38	0.62 ic	---	---	---	14.49	---	---	---	---	---	15.11
5.43	117,006	105.43	0.62 ic	---	---	---	15.27	---	---	---	---	---	15.89
5.49	117,282	105.49	0.62 ic	---	---	---	16.07	---	---	---	---	---	16.69
5.54	117,558	105.54	0.63 ic	---	---	---	16.87	---	---	---	---	---	17.50
5.60	117,833	105.60	0.63 ic	---	---	---	17.69	---	---	---	---	---	18.32

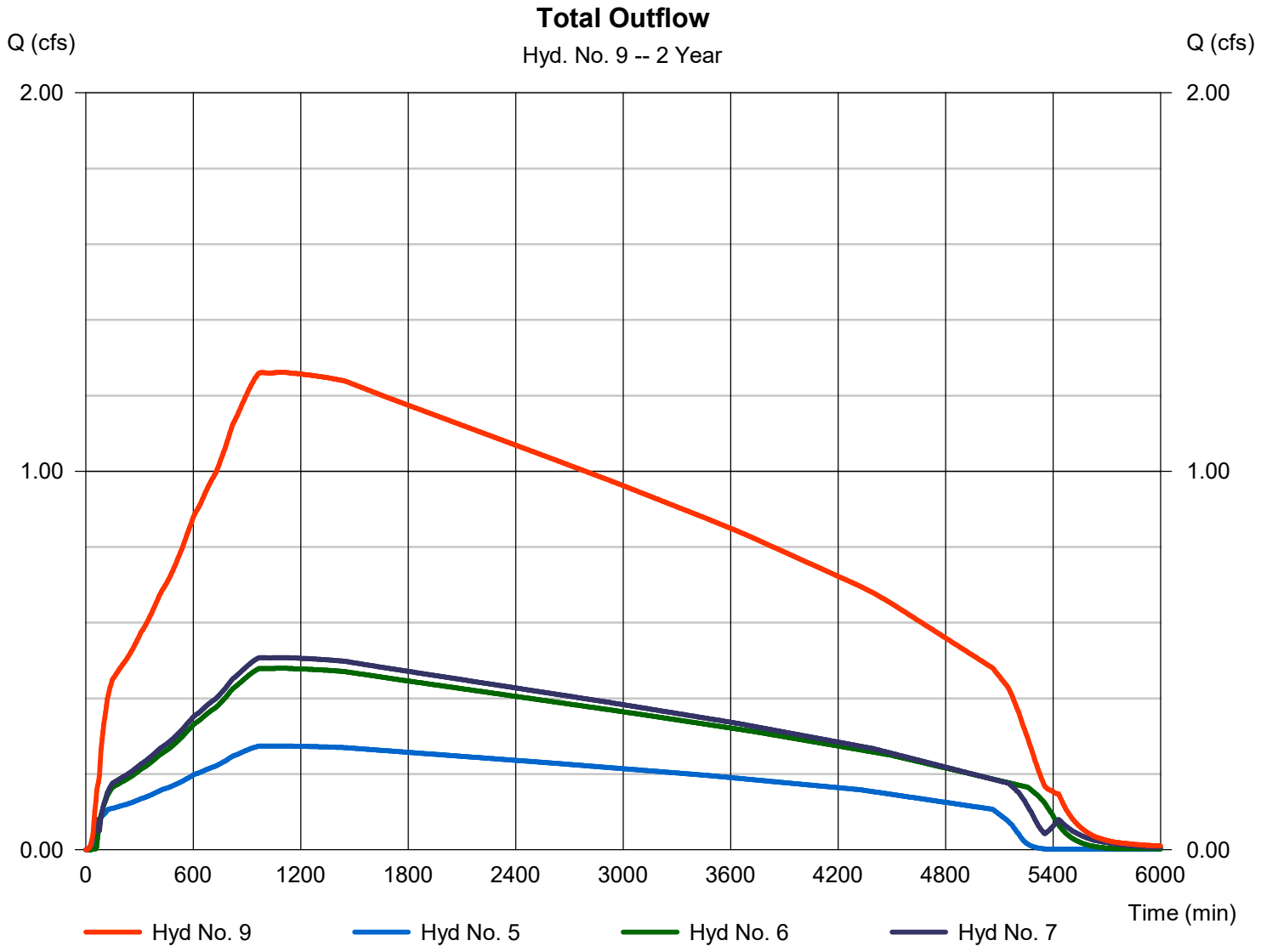
...End

Hydrograph Report

Hyd. No. 9

Total Outflow

Hydrograph type	= Combine	Peak discharge	= 1.261 cfs
Storm frequency	= 2 yrs	Time to peak	= 1085 min
Time interval	= 5 min	Hyd. volume	= 282,847 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 0.000 ac

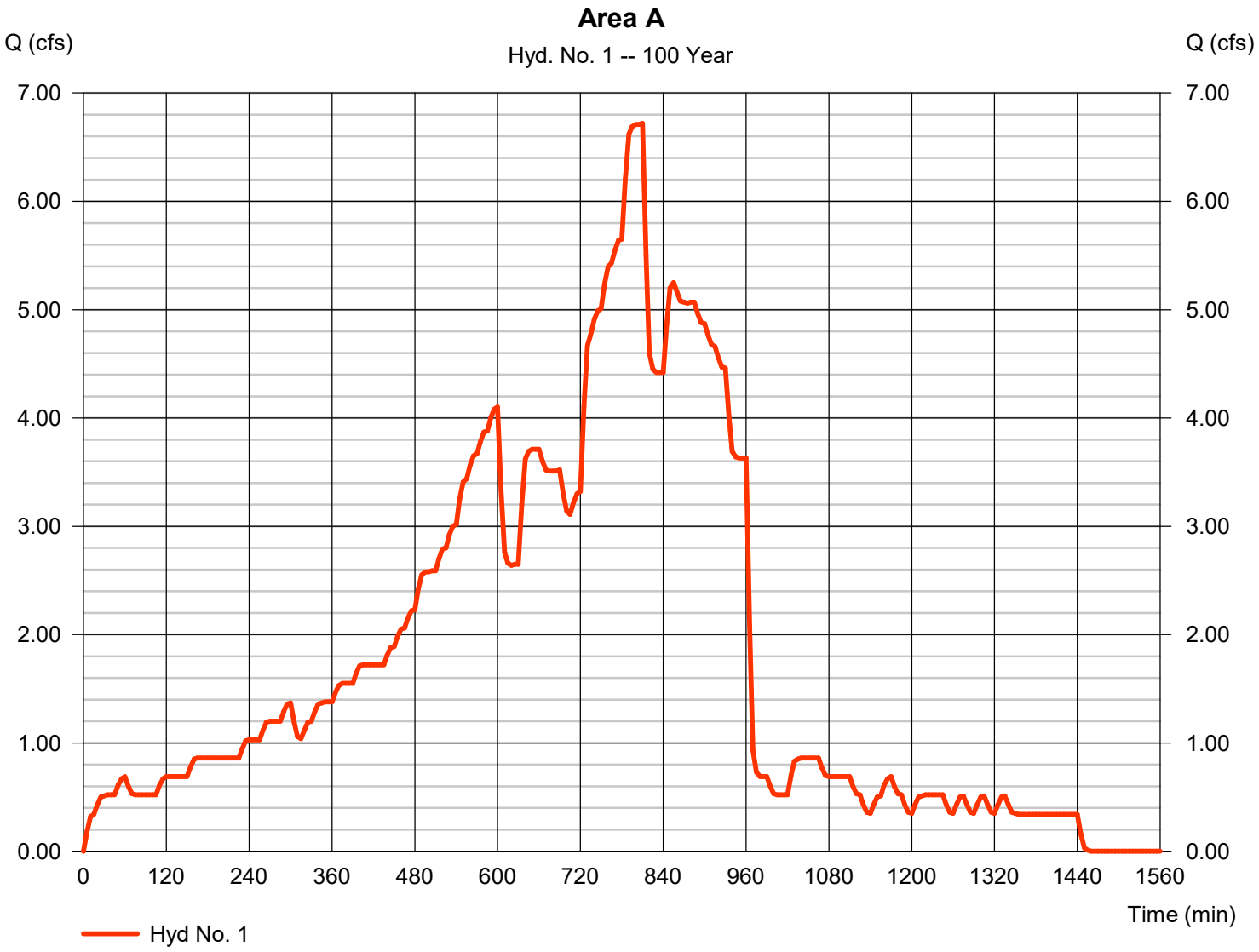


Hydrograph Report

Hyd. No. 1

Area A

Hydrograph type	= Manual	Peak discharge	= 6.720 cfs
Storm frequency	= 100 yrs	Time to peak	= 810 min
Time interval	= 5 min	Hyd. volume	= 165,438 cuft

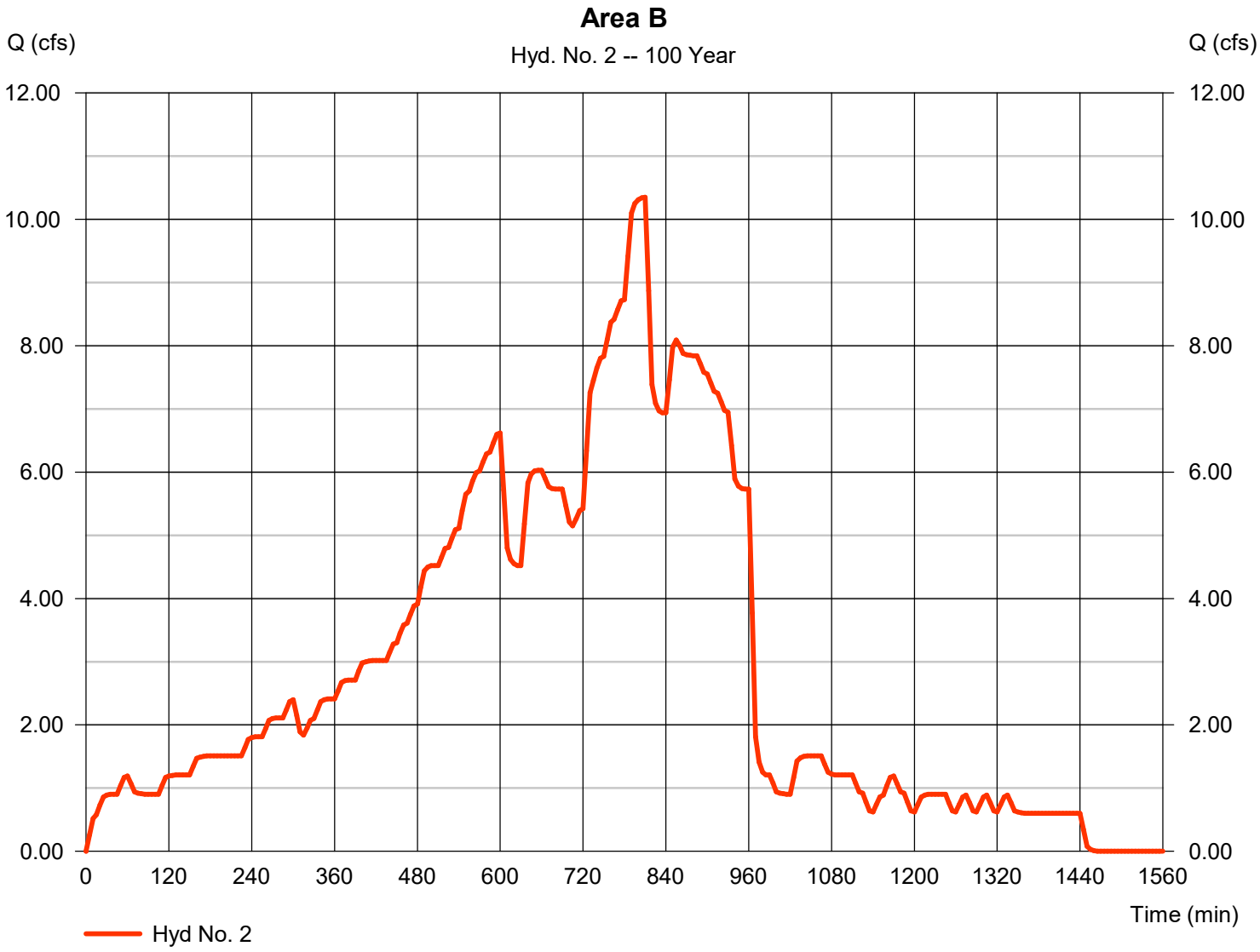


Hydrograph Report

Hyd. No. 2

Area B

Hydrograph type	= Manual	Peak discharge	= 10.35 cfs
Storm frequency	= 100 yrs	Time to peak	= 810 min
Time interval	= 5 min	Hyd. volume	= 271,569 cuft

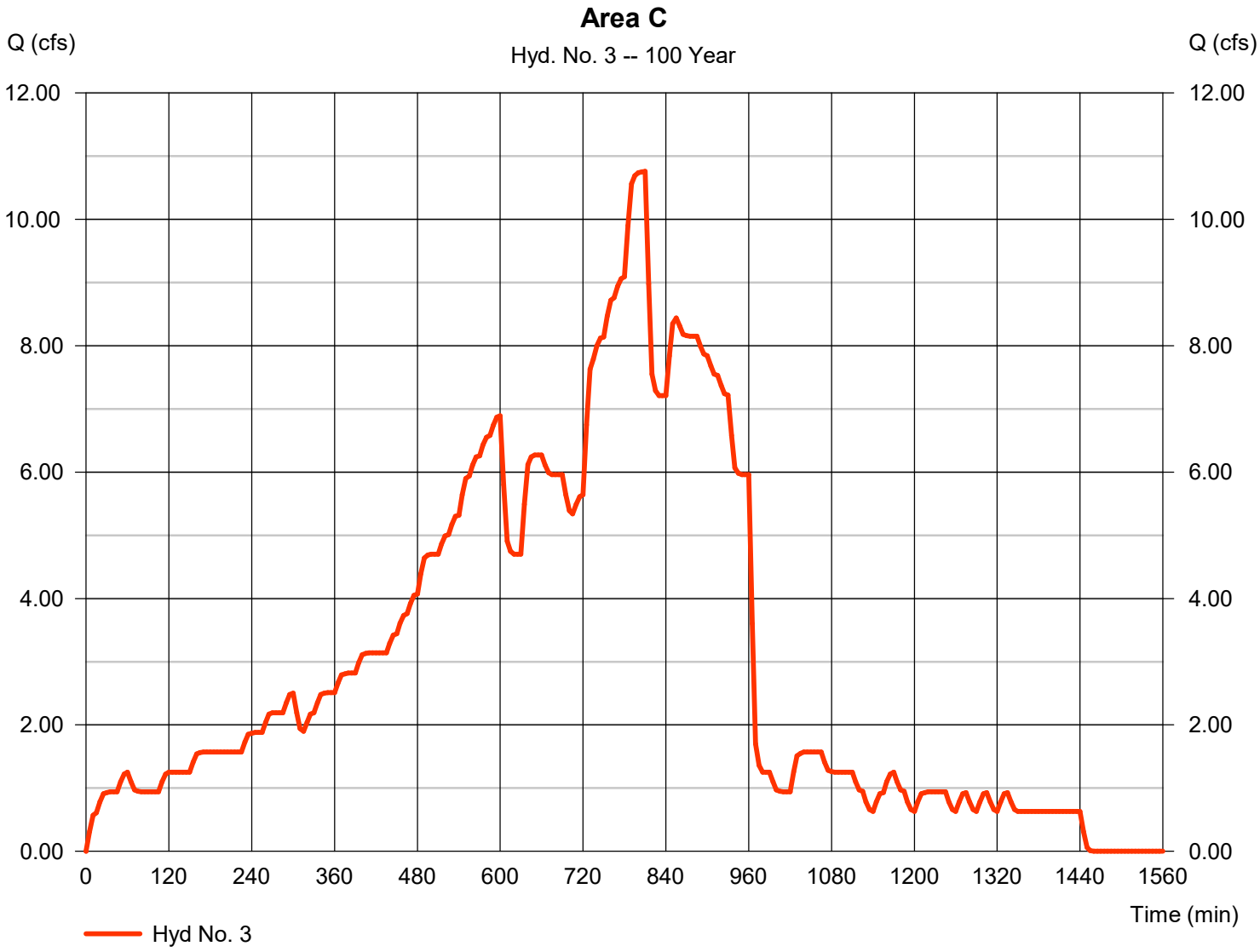


Hydrograph Report

Hyd. No. 3

Area C

Hydrograph type	= Manual	Peak discharge	= 10.76 cfs
Storm frequency	= 100 yrs	Time to peak	= 810 min
Time interval	= 5 min	Hyd. volume	= 282,303 cuft



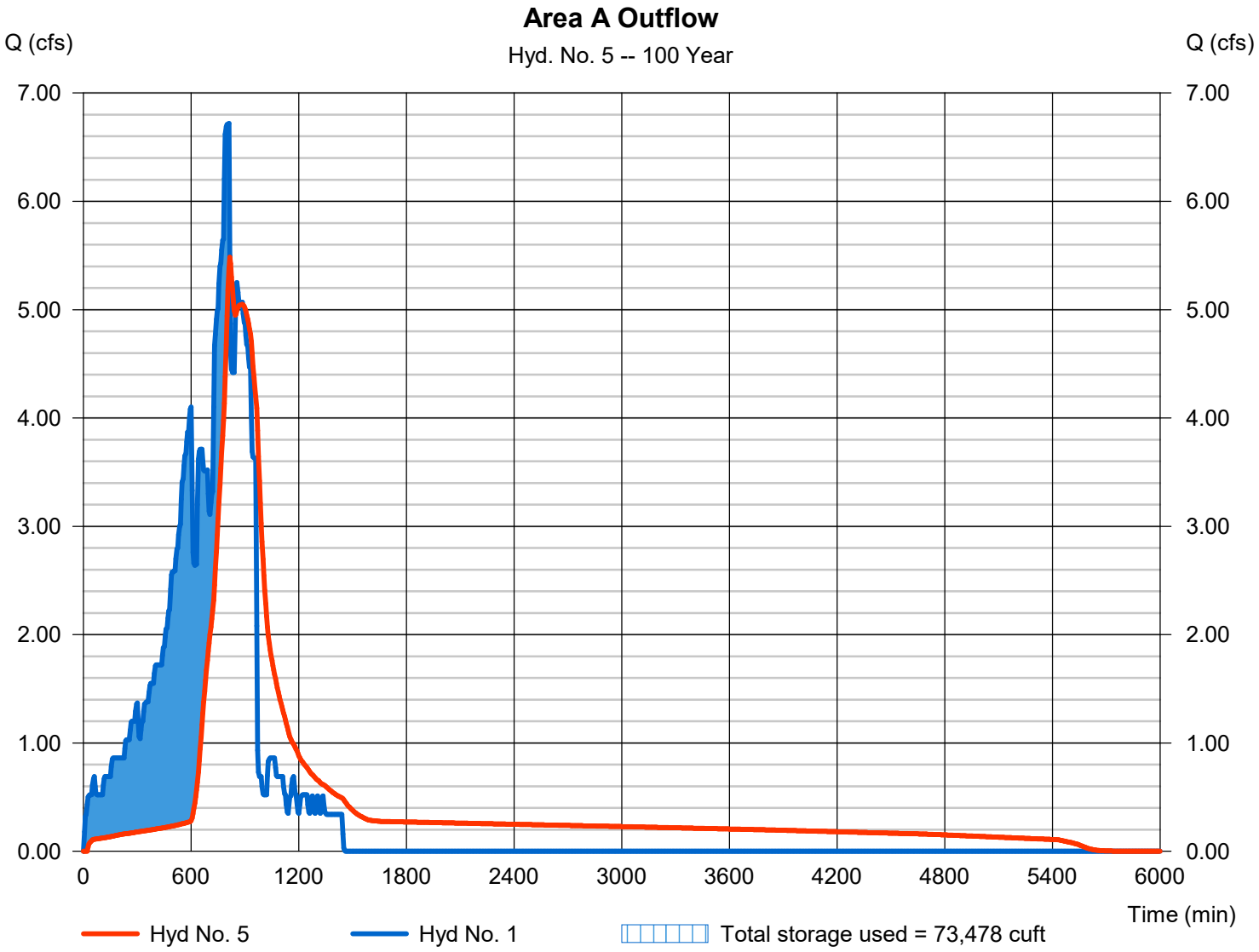
Hydrograph Report

Hyd. No. 5

Area A Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	5.484 cfs
Storm frequency	=	100 yrs	Time to peak	=	815 min
Time interval	=	5 min	Hyd. volume	=	165,230 cuft
Inflow hyd. No.	=	1 - Area A	Max. Elevation	=	105.07 ft
Reservoir name	=	Detention System A	Max. Storage	=	73,478 cuft

Storage Indication method used.



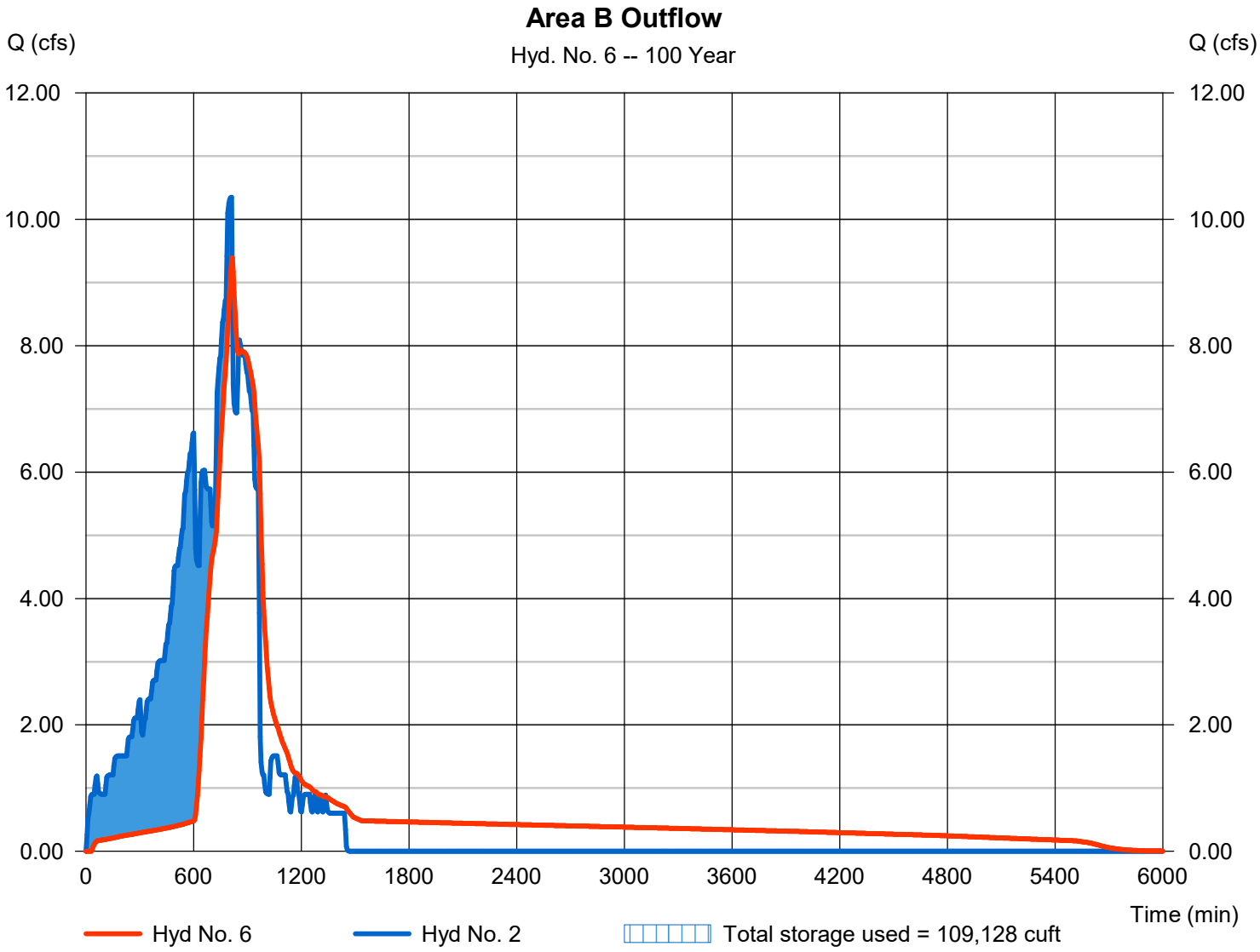
Hydrograph Report

Hyd. No. 6

Area B Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	9.393 cfs
Storm frequency	=	100 yrs	Time to peak	=	815 min
Time interval	=	5 min	Hyd. volume	=	271,108 cuft
Inflow hyd. No.	=	2 - Area B	Max. Elevation	=	105.01 ft
Reservoir name	=	Detention System B	Max. Storage	=	109,128 cuft

Storage Indication method used.



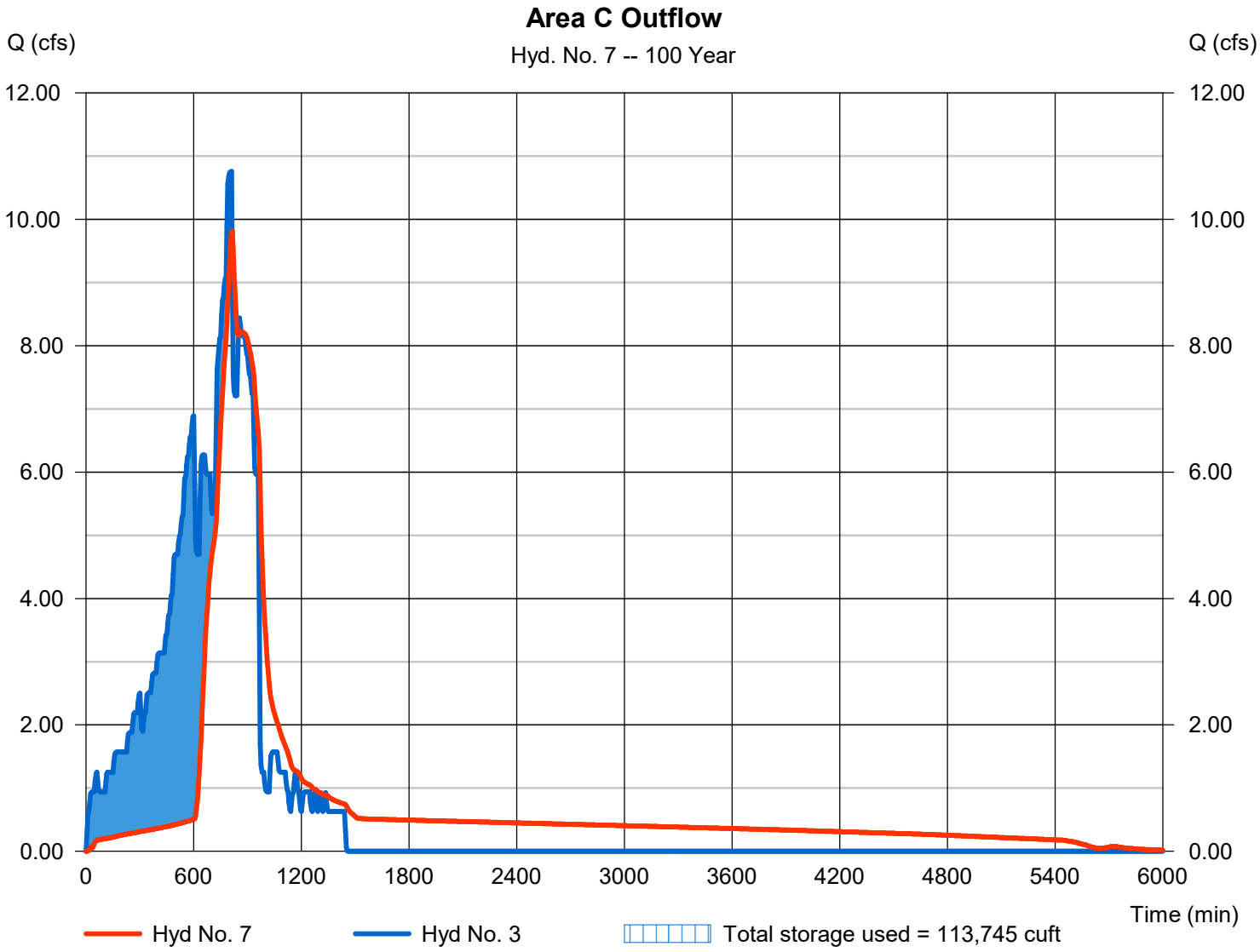
Hydrograph Report

Hyd. No. 7

Area C Outflow

Hydrograph type	=	Reservoir	Peak discharge	=	9.811 cfs
Storm frequency	=	100 yrs	Time to peak	=	815 min
Time interval	=	5 min	Hyd. volume	=	282,263 cuft
Inflow hyd. No.	=	3 - Area C	Max. Elevation	=	104.97 ft
Reservoir name	=	Detention System C	Max. Storage	=	113,745 cuft

Storage Indication method used.



Hydrograph Report

Hyd. No. 9

Total Outflow

Hydrograph type	= Combine	Peak discharge	= 24.69 cfs
Storm frequency	= 100 yrs	Time to peak	= 815 min
Time interval	= 5 min	Hyd. volume	= 718,600 cuft
Inflow hyds.	= 5, 6, 7	Contrib. drain. area	= 0.000 ac